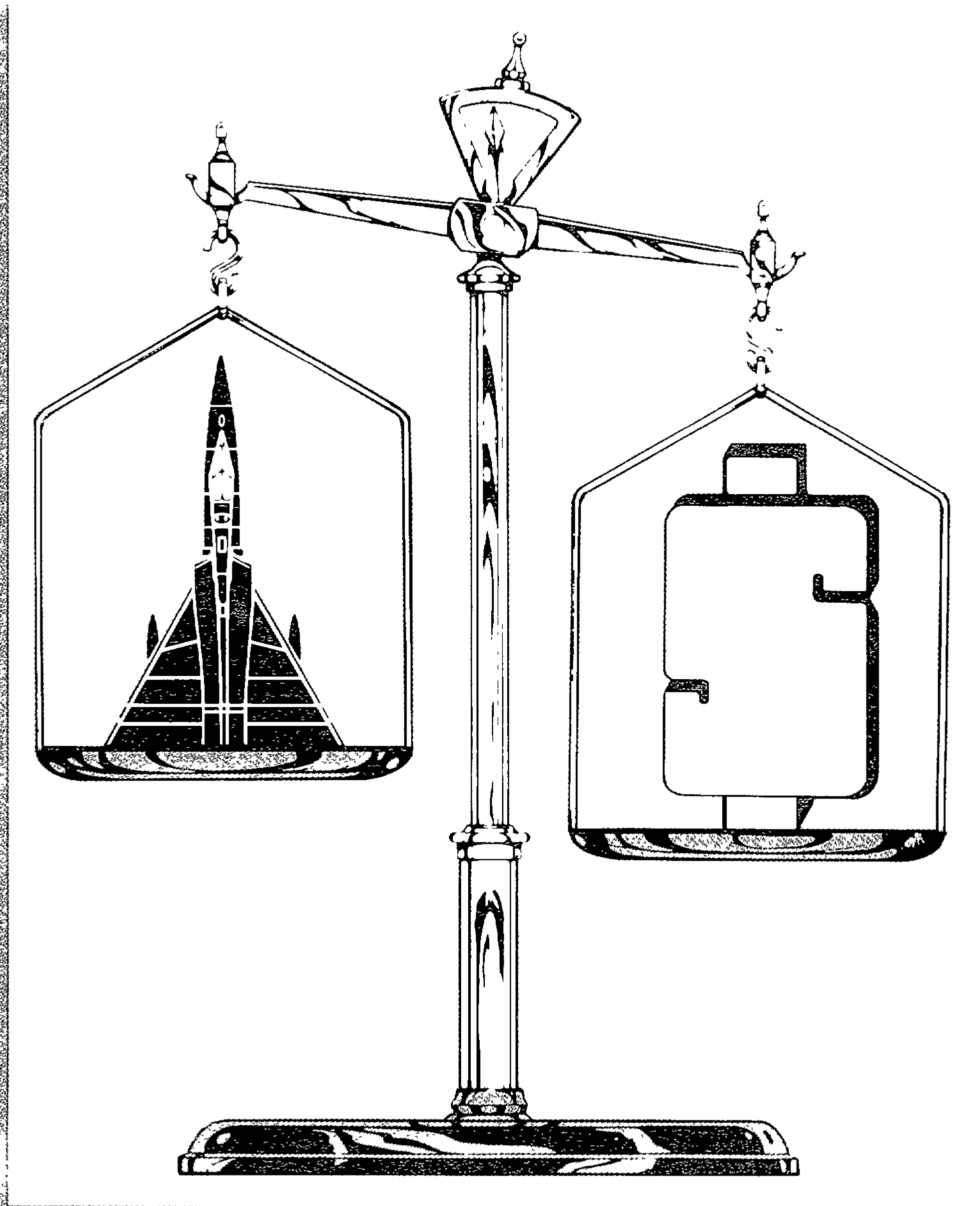
21 Issue 2

The GAO Review

Cost of Major Weapon Systems: Are Reforms on the Way?



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From Our Briefcase

U.S. Comptroller General's Role in Deficit Reduction

The Balanced Budget and Emergency Deficit Control Act of 1985 (P.L. 99-177) thrusts the Comptroller General into the middle of a controversial attempt to reduce the annual U.S. deficit to zero by fiscal year 1991. Popularly termed the Gramm-Rudman-Hollings bill after the three senators who proposed it, the law provides that the Office of Management and Budget (OMB), the Congressional Budget Office (CBO), and the General Accounting Office (GAO) compare projected U.S. deficits against congressionally established targets. If projected deficits do not achieve reduction targets, each agency has a role to play. The role of each agency is discussed below in terms of the fiscal year 1987 timetable for implementing the act.

• **OMB and CBO Role.** In August OMB and CBO will jointly examine the federal budget to see if the deficit is going to meet the target figure of (for fiscal year 1987) $144 billion. If the deficit is not within $10 billion of the mark, across-the-board cuts based on formulas established in the act will go into effect. (Certain programs, such as social security and some programs for low-income individuals, are exempt, and cuts are to be split evenly between defense and civil programs.) OMB and CBO will then submit a joint report to the Comptroller General.

• **GAO's Role.** The Comptroller General and GAO staff will review the data and estimates submitted by OMB and CBO. Based on that review, plus any available additional information, the Comptroller General will issue a report, within 5 days, estimating federal revenues and expenditures; the "excess deficit"; economic growth rates; and amounts and percentages of reductions (by account and by programs, projects, and activities within accounts) that must be taken during the fiscal year to eliminate the excess deficit. The Comptroller General must explain fully any differences between his report and that of OMB and CBO. GAO's role does *not* involve program policy. Instead, GAO will make estimates and computations according to rules in the law.

• **After the Comptroller General's Report.** By September 1, the President must order budget reductions, based on the Comptroller General's report. The cuts will take effect on October 1, the first day of the fiscal year. On October 5, OMB and CBO will issue a revised report on the budget outlook, reflecting congressional action in response to the President's budget reduction order (called a "sequesteration order"). GAO will review this report and issue a revised report to the President on October 10. Based on GAO's findings, the President will issue a final order on October 15, which will take effect immediately. The final GAO report, which describes compliance with actions to date, is due November 15.

• **Action to Date.** The Gramm-Rudman-Hollings legislation actually took effect with fiscal year 1986. Thus, the timetable for implementing it this fiscal year has been different. OMB and CBO issued their joint report to the Comptroller General on January 15, the Comptroller General issued his report to the President on January 21, and the President issued his sequesteration order on February 1. The cycle went smoothly, with the Comptroller General's report essentially confirming the joint OMB/CBO report submitted to him. While the report did make several changes in individual accounts, these changes were not sufficient in the aggregate to alter the percentage reductions of 4.9 percent for defense programs and 4.3 percent for nondefense programs. The legislation has resulted in total cuts of $11.7 billion for fiscal year 1986.

• **Constitutionality of the Act.** There are those who disagree with the act; the role of the Comptroller General is the central issue in several lawsuits contesting the constitutionality of the Gramm-Rudman-Hollings plan.

The chief lawsuit was filed in January 1986 by Representative Mike Synar, on behalf of himself and 11 other members of the Congress. Synar charges that the Comptroller General's role serves to mask the unconstitutional role of CBO, whose director is not appointed by the President and, therefore, is an officer of the legislative branch and not an officer of the United States. (The Justice Department, in a separate brief, also argues that the role of the Comptroller General is unconstitutional. Arguments over the role of the Comptroller General have been raised before, most recently in court cases over the constitutionality of the 1984 Competition in Contracting Act.)

The Synar case also posits that the role of the Comptroller General is inconsistent with the separation of powers. In response, GAO's own 55-page brief argues that "The Comptroller General's status as an independent officer of the United States derives not from any 'executive' or 'legislative' label, but from the method of his appointment and his freedom to exercise his authority independent of any branch of government."

The GAO brief dismisses Synar's argument that the Gramm-Rudman-Hollings law unconstitutionally delegates the congressional "power of the purse" to the Comptroller General and to the President by stating that the duties of both officials are carefully prescribed. GAO asserts that the Comptroller General meets the constitutional definition of an officer of the United States because he is appointed by the President with the advice and consent of the Senate and is subject to removal by impeachment.

GAO's brief, prepared with assistance from the Washington law firm of Wilmer, Cutler, & Pickering, is valuable for its tracing of the development of the role of the Comptroller General from its earliest roots in the Treasury in 1789, through the Dockery Act of 1894, to the Budget and Accounting Act of 1921, which created the present-day GAO. Since 1921, the brief states, the Comptroller General has been given additional duties of an administrative or judicial character.

• **Legal Rulings.** On February 7, 1986, a special federal judicial panel ruled that the automatic budget-cutting provisions of the law are unconstitutional: By giving executive branch decisionmaking authority to the Comptroller General, the law violates the Constitution's separation-of-powers requirements. The judicial panel stayed the order until the Supreme Court issues a ruling, which was not available at press time.

• **Spending Cuts in GAO.** GAO's share of the required cuts is $13 million of its $300.9 million fiscal year 1986 budget. Currently, no staff reductions are required, although an agency-wide, 1-day furlough (time off without pay) may be necessary in September 1986. Most spending cuts have been in travel, training, and procurement of goods and services.

Excellence in Government: Train To Obtain?

The challenge of how to achieve and sustain excellence has become an increasingly popular topic in recent years. In this issue's "Manager's Corner" (p. 9), Herb McClure reviews some current literature on the topic, while Nancy Kingsbury speculates on what "excellent" management may look like in the future. Related to these discussions is a six-article forum in the fall 1985 issue of *The Bureaucrat: The Journal for Public Managers.* The series, entitled "Towards Excellence in Government," covers perceptions of excellence, job definitions and concepts, managers' roles, strategic vision, cost accountability, and the leaderless environment.

Editor Mark A. Abrahamson, who also directs the Center for Excellence in Government, based in Washington, D.C., says the forum is not intended to be a handbook of new techniques for public managers. Instead, "the articles convey a range of roles which public managers can assume," particularly that of the proactive leader. The articles are based upon interviews with business and government leaders, discussions with public managers, and experiences of managers in federal agencies. The forum begins with an overview of the manager's total job and ends with articles that discuss specific aspects of the manager's job. The forum highlights the issue of training: How can public managers be better prepared to improve the performance and the image of government?

Four Perceptions

In the forum's first article, Abrahamson cites four categories of public perceptions about excellence in government that he derived from interviews with government leaders in 1983-84. He gives examples of the values that shaped the perceptions and suggests some ways of training managers. His views follow.

• **Democracy is messy.** This view argues that the performance of government is acceptable, but that the inherent nature of our democratic government often creates an image of inefficiency and ineffectiveness. While government may perform at an acceptable level, it is perceived to be "messy" because of the many factors involved in our democratic system. Advocates of this view believe that the values of due process and equal opportunity lead to a perception that government is slow and cumbersome. To counteract this image, managers must help the public become aware of the unique costs and goals of our system.

To achieve this goal, managers must first learn these costs and goals themselves. Abrahamson suggests updated "civics" training that public managers could use to better understand democratic values and processes. He also refers to the book, *In Search of Excellence,* by Peters and Waterman, who suggest that excellence is "hands-on, value driven." Unless the values of democracy are transmitted within our large government organizations, the public will be unable to clearly see and appreciate the government's work.

• **Government takes a bum rap.** This view argues that government's performance is really much better than the public perceives it to be. Negative information in the media and from politicians outweighs the positive results of government performance. Advocates suggest that public managers should assume responsibility for explaining government programs in terms that the public can understand. Managers should share positive results through the media and create role models for other agencies to follow. To do this, they will need training in public relations and communication skills, perhaps even in advertising and marketing. Another attribute of excellence is being "close to the customer." This type of training would help managers to better understand, provide quality services for, and communicate regularly with their customers/taxpayers.

• **Government must shape up.** This view argues that government's performance is unacceptable, that the public's low perception is largely accurate, and that corrective actions are long overdue. Managers should assume responsibility for improving the performance of their own programs; government systems must support creative managers. To achieve these improvements, managers must develop autonomy and entrepreneurship. Training managers to use such attributes is not as straightforward as it is for marketing or communication skills. Instead, managers must learn a bias for action, an orientation to the public sector, and the ability to act within it. Classes in organizational culture might be one way to shape the public's perception. Awareness of in-house culture could enable managers to address excellence more systematically from within.

• **The country must shape up.** This view argues that the other sectors of the nation, not just the government, must begin to work cooperatively. We must improve the performance of the nation as a whole, not just the public sector. This view implies the expansion of the public manager's job in the future. Managers must be able to take societal goals and develop programs in harmony with business and other parts of the society. Although all the above skills apply, managers will also need the ability to negotiate, bargain, and facilitate. Mr. Abrahamson believes that "it is clearly possible to develop training for this new responsibility."

Other Topics

The remaining articles in the forum elaborate on the themes of excellence and the public manager's role. In one of them, GAO's Roger Sperry describes a manager as a leader, decisionmaker, manager of people, change agent, coordinator, and integrator. Karen and Gret Gaertner, two management consultants, advocate a proactive role for federal managers with the manager as developer of an organizational vision. Ann Brassier of the Office of Personnel Management also advocates a strategic vision, in contrast to a cumbersome planning process or a special management technique. Toni Marzotto, a political science professor, discusses why managers must determine and manage costs within their organizations. She argues that managers have to redefine their jobs to include the management of costs as a major aspect of their role.

Lastly, Richard Schmidt of the Department of Health and Human Services discusses the challenge of managing in a leaderless environment. It is not unusual for managers to spend a large part of their careers rotating between their jobs and their bosses'. If government is to function well at all times, public managers must define their jobs in productive terms during the period in which no leader is present. Mr. Schmidt offers the following advice to the leaderless:

- Make normal decisions normally.
- Promote open information exchanges.
- Do not permit the process mechanics to take over.
- Do not allow petty turf issues to become more important than they really are.
- Never forget that your leader will eventually arrive.

Debate

Together, this forum and "Manager's Corner" give a comprehensive review of positions in the excellence debate. How can managers respond to the problems of government's image and performance? How can they provide leadership in a leaderless setting? Training is one tactic. Heeding good advice is another. As the private and public sectors work together, solutions can be developed.

The Bureaucrat is available in the GAO Technical Library. It can also be obtained by writing to P.O. Box 347, Arlington, VA 22210.

Learning Skills for Financial Management

If public managers should be trained to improve the government's performance (see preceding "Briefcase" item), how should graduate students prepare for critical management roles? Recent surveys indicate that professional managers rank financial skills high among critical management skills. Gloria A. Grizzle, associate professor of public administration at Florida State University, reports on the extent to which masters in public administration (M.P.A.) programs currently teach essential financial management skills in her article in the November/December 1985 issue of the *Public Administration Review* (PAR). She considered the total amount of course work that M.P.A. candidates generally complete and then compared the course content to those skills that practitioners believe are essential.

Results of the Survey

The typical M.P.A. candidate completes a single course in budgeting and financial management that likely gives significant coverage to about one third of the financial management skills deemed essential. Analytic skills, such as cost-revenue analysis, financial condition evaluation, and cost-benefit analysis, are seldom covered. Also, most courses do not include significant coverage of governmental accounting or computerized financial modeling. Grizzle compiled her data from the MacManus survey of 60 chief budget officers in Houston and the Berne study of budget directors in nine major U.S. cities, six state and local government managers, and four professors of financial management. Twenty-two skills were listed as "definitely required of all M.P.A. students." While some categories overlapped, a majority of both groups believed that students should be competent in budget preparation (operating and capital), revenue forecasting, cost-benefit analysis, and accounting.

Comparing Coursework to Essential Skills

Grizzle then compared the content of existing required course work with the preferences of budget officers surveyed for 63 M.P.A. programs listed in the 1982 and 1984 directories of the National Association of Schools of Public Affairs and Administration (NASPAA). The budget officers ranked the 22 skills they deemed most essential, from cost-benefit analysis, which the highest percentage of respondents cited, through cost accounting, which the lowest percentage cited (see Fig. 1).

Assessing the Results

Grizzle found that the core budgeting courses were much more likely to cover public finance perspectives of taxation than the administrative and management perspectives of taxation. In addition, analytic skills were underrepresented in the curriculum offerings, especially for cost-benefit analysis, cost-effectiveness analysis, fiscal impact analysis, present value concepts, cost-revenue analysis, and financial condition. Less than a third of the M.P.A. programs covered expenditure-of-revenue forecasting skills. Accounting received uneven treatment: In seven programs accounting dominated the curriculum; 42 percent of the programs did not mention accounting in their syllabi. Fifteen programs covered governmental accounting to varying degrees.

Among other points, Grizzle notes that the required financial management courses, on the average, give at least one week's coverage to only one third of the financial management skills deemed most important. She concluded that a mismatch exists between what employees want and what M.P.A. programs at NASPAA schools offer.

Meeting Employers' Needs

Grizzle suggests that M.P.A. programs might meet employers' needs by retaining, but spending less time on, budgeting and taxation and by deleting topics deemed unessential, such as budgeting theory, pensions, and collective bargaining. She also sees a need for M.P.A. students to learn material on governmental financial accounting and reporting as well as managerial techniques for financial management. Her recommendations match the types of skills and directions needed to improve federal financial management. The authors of articles in this issue's "GAO Forum" (p.28) further define this issue.

The *Public Administration Review* is available in GAO's Technical Library. Interested readers may also obtain a copy by writing to the American Society for Public Administration, 1120 G Street, N.W., Washington, D.C. 20005.

Figure 1 Essential Skills for Managers

- *Cost-benefit analysis*
- Budgeting processes (political and organizational aspects)
- Budget preparation (operating, capital, cash, etc.)
- Budget analysis (justification, performance indicators, etc.)
- Budgeting approaches (e.g., zero-based budgeting)
- Financial condition evaluation
- Cost-effectiveness analysis
- Cost-revenue analysis
- Taxation (administrative or managerial perspective)
- Governmental financial accounting and reporting
- Expenditure forecasting
- Revenue forecasting
- Capital investment analysis
- Taxation (public finance perspective)
- Debt management
- Fiscal impact analysis
- Present value concepts
- Intergovernmental finance
- User charges
- Financial information systems
- Computerized financial modeling

Professional Secretaries' Publication

"I enjoy the career I have chosen," reports a secretary in California, "but the women I work with can't understand why anyone would want to be 'just' a secretary. They think that I'm simply using my job as a stepping-stone until a 'real' job comes along. Some of them also seem to feel that, as a secretary, I am unqualified and need play-by-play instructions for everything. In fact, they spend so much time giving me instructions, I sometimes wonder how they ever get their own work done."

This quote introduces an article in *Personal Report for the Professional Secretary*, a biweekly newsletter published by The Research Institute of America. This publication, which is written for secretaries, contains short articles, news items, and other features of particular interest to members of the profession.

The article discusses strategies secretaries can use to deal with such situations as the one cited above. This newsletter also addresses such topics as part-time work, office supervision, interpersonal skills, and professional development. Most of the articles are brief, describe a short case study or situation, and offer some practical solutions and approaches.

For example, the October 3, 1985, issue addressed the situation in which secretaries must respond to complaints. "A complaint bureau!" says one executive secretary. "There are days when I feel like that's exactly what my office is. One person comes in to say it's too hot, another to report that there's an annoying clunk in the new word processor. A junior clerk complains that she's getting all the dog jobs; an expediter growls that billing orders aren't sent to him on time. Day after day, it's one thing after another—the complaints stop here!" The article presents several simple and direct approaches for effectively handling such situations.

One feature of this publication, "Book Notes," reviews professional books of interest to secretaries. Another feature, "Briefly Speaking. . .," contains very brief job-related tips and techniques. Many issues have one-page supplemental flyers that advertise or announce training programs, conferences, and other items of special interest to secretaries.

Each article in *Personal Report* ends with an observation contained in a summary. One observation illustrates the important role the professional secretary plays in an organization: "Secretaries are in a unique position, because they are privy to a great deal of information about who is doing what—and how. Some of it may be mere gossip, some of it may be factual, but it all plays a part in determining the reputation of people in the organization. This is a powerful position to be in, and one which, like any other power, is best exercised responsibly."

Personal Report for the Professional Secretary is available from The Research Institute of America, 589 Fifth Avenue, New York, N.Y. 10017. It is also available in the GAO Technical Library.

Accounting Update

Federal Government Reporting Study

GAO and Canada's Office of the Auditor General (OAG) have conducted a joint, in-depth study of the needs of users of federal government financial reports. The study, entitled the "Federal Government Reporting Study" (FGRS), is part of an effort to improve financial reporting at the federal level, particularly regarding summary financial reports. The study was completed in March of this year.

The objectives of FGRS are to (1) identify and describe user activities and (2) identify federal government financial information needed by users. The study identified six categories of users, including

- legislators;
- media, citizens, policy analysts, special interest groups, and other levels of goverment;
- government planners and managers;
- macroeconomists and central bankers;
- corporate sector users; and
- lenders and security dealers.

The research teams in each country undertook the study in different, though complementary, ways. The major difference is that in Canada the research effort was led by expert users assisted by accountants, whereas in the United States the effort was led by accountants assisted by expert users. Both countries exchanged research results frequently during this study.

Results of FGRS were summarized and analyzed and reports were written jointly by GAO and OAG. According to the study, most user-group information needs were similar from country to country, although some differences did occur. For example, when users were asked about including a liability for the U.S. Social Security/Canadian Pension Plan on financial statements, most U.S. users believed the Social Security liability should be disclosed on the statements. However, the majority of Canadian users believed the statements should not show the Canadian Pension Plan. An analysis of this difference showed that U.S. users consider Social Security similar to a pension liability and the responsibility and moral obligation of the federal government. In Canada, the Canadian Pension Plan is a joint responsibility of the provinces and the federal government and considered more a provincial than federal obligation. Therefore, the Canadians want the liability disclosed only in a note and not on the financial statements.

Several areas need to be studied further. Some issues, such as fixed assets, were not conclusively resolved through discussions with users. The majority of users wanted fixed assets recorded on the financial statements and depreciated. However, no clear consensus existed on how fixed assets should be valued and categorized, or if certain categories, i.e., major weapons, should be shown differently.

The study groups produced

- a detailed report of all findings, with illustrations;
- a summary report;
- an illustrative annual report of the U.S. government; and
- an illustrative annual report of the Canadian government.

Contact Bruce Michelson, (202) 275-9423, for more information.

CARE Methodology Published

In July 1985, GAO published a manual describing its Controls and Risk Evaluation (CARE) audit methodology. The manual, *CARE Audit Methodology To Review and Evaluate Agency Accounting and Financial Management Systems*, incorporates numerous changes resulting from issuance of an exposure draft version in fall 1984.

The CARE approach, developed by GAO, is intended to identify and evaluate the adequacy of controls in the unit under review and determine the degree of the systems' conformity with the Comptroller General's accounting principles and standards and other requirements.

GAO designed CARE audit methodology to help evaluators and agency officials evaluate the effectiveness of financial management information systems. The CARE approach to assessing the exposure level of risk to fraud, waste, and mismanagement can be applied to reviews of programs and administrative operations.

The methodology is flexible, allowing the auditor to evaluate the effectiveness of the control environment of an individual agency, a major organizational component, an operational unit, or a system. Once the scope of the review has been determined, CARE guides the auditor in reviewing the control environment and management control systems regarding all aspects of the selected entity's operations.

GAO tested CARE audit methodology in 1984 by compiling a financial management profile of the Department of Health and Human Services (HHS), the largest federal civilian agency, responsible for one third of the federal budget. The resulting report (GAO/AFMD-84-15, Apr. 9, 1984) described each of the 81 systems that composes HHS' financial management structure and discussed their interrelationships and internal controls. CARE audit methodology will be used as the basis for all GAO financial systems audit work.

In summer 1985, GAO developed a 3 1/2-day introductory training course in CARE methodology. In December 1985, following testing and the resultant refinements, GAO began teaching the course to staff who review accounting and financial management systems.

Although it developed the methodology for its internal use, GAO is making the manual and, to the extent practical, the training program available to others in the financial management and audit communities.

Contact Virginia Robinson (202) 275-9513 for more information. See also the spring 1985 *Review* for background.

Paper on Financial Systems Development

In connection with its efforts to improve financial management in the public sector, GAO is developing a brief document describing some of the important aspects of accounting and financial management systems development. The paper is intended to explain—concisely and in nontechnical terms—the critical aspects of systems development projects to lay readers. GAO expects some members of the Congress and others who have expressed interest in federal accounting and financial management systems to use the document. A number of knowledgeable and interested persons in the federal and private sectors were invited to comment on a draft version.

Contact Virginia Robinson (202) 275-9513 for more information.

On Location

Third Annual Management Meeting

GAO is on the road toward achieving excellence on a par with a select few organizations in business and industry, Comptroller General Bowsher said at the third annual management meeting, held November 14-16, 1985. Speaking before 180 GAO senior staff, he emphasized that a commitment from everyone—senior executives, managers, evaluators, and secretarial and administrative staff—is necessary to achieve excellence in responding to GAO's internal needs and those of the Congress.

Senior managers, including the Comptroller General and Assistant Comptrollers General, division and office directors, regional managers, and other agency executives, gathered at the Xerox International Center for Training and Management Development near Washington, D.C., to discuss GAO's past performance and future direction. The theme of the meeting, "Working Smarter," was developed through a program that included a videotape called "GAO 1986: Issues and Challenges." The videotape featured a discussion of the significant national issues GAO will address in 1986-87, such as the ties among the U.S. agricultural economy, the banking system, and international trade. Mr. Bowsher also reviewed 1985 accomplishments: 586 reports, testimony at 117 hearings, and financial accomplishments of $11 billion.
Mr. Bowsher was especially pleased with the $11 billion in accomplishments and pointed out that the increase in the level of financial accomplishments attributable to GAO's work was commensurate with the increase in the level of federal spending. However, he reminded the audience that GAO's October 18, 1985, oversight hearings before the Subcommittee on Legislation and National Security of the House Committee on Government Operations highlighted several concerns.

One of the key concerns was GAO's responsiveness to the Congress, an issue currently being addressed by a program for operations improvement. Its objectives are to review and improve the agency's policies and practices to foster the most effective and efficient use of its resources in accomplishing its mission. Initially, all units and staff were invited to suggest improvements to GAO-wide procedures. Suggestions included changing the administrative support structure at audit sites, testing the feasibility of applying a division's microcomputer-based job-tracking system to other units, and increasing the number of products signed by associate directors and regional managers.

The program has evolved since its inception at the 1984 management meeting. Now directed by a steering committee of senior GAO managers, the program includes 40 pilot projects intended to implement several hundred improvements agency-wide. The systemic projects deal with processes or policy issues common throughout GAO, and the unit-centered projects are aimed at streamlining operations within a specific division, region, or office.

The conference participants spent much of their time in small-group sessions, discussing topics such as the various operations improvement initiatives, GAO's role in conducting investigations, pay for performance, and affirmative action.

In the final session, Mr. Bowsher stressed plans to place responsibility for setting and meeting affirmative action objectives with individual units. He noted that GAO's equal employment opportunity profile has improved markedly in the past years, but that some units have been paying closer attention to equal employment opportunity than others. Mr. Bowsher stressed the need for all units to actively recruit and develop minority men and women of all races.

Remarks by Assistant Comptroller General for Operations Frank Fee succinctly summarized the conference theme. "Our time frame for improving operations must be a continuing program through Mr. Bowsher's term and into the future. . . . Our travels down the road to excellence will be worthwhile when we reach our destination: recognition of GAO as the best in its field."

1985 Office-wide Awards

GAO's annual office-wide awards ceremony was held November 20 in the historic Pension Building, recently renovated and reopened to the public as the National Building Museum. From 1926 until the GAO Building was completed in 1951, the red brick Pension Building, noted for its size and unique architecture, served as GAO's headquarters. In this impressive setting, Representative Vic Fazio of California gave the keynote address and praised the accomplishments of the 62 individuals being recognized for their contributions to GAO's mission in fiscal year 1985. Mr. Fazio, chairman of the House Legislative Appropriations Subcommittee, is knowledgeable about GAO's operations and plays a key role in providing GAO with the resources to carry out its mission. Representative Fazio shared his perspectives on improved government operations and GAO's role in achieving them.

Among the awardees were Ira Goldstein, deputy director for operations in the Human Resources Division, and former Senator Charles H. Percy, who received the Comptroller General's Award and GAO's Public Service Award, respectively. Eight staff members received distinguished service awards, 48 received meritorious service awards, and two were honored for equal employment opportunity accomplishments.

In addition, awards for the two best *GAO Review* articles of 1985 went to Eric Green, former writer-editor, Office of Publishing Services (now the Office of Publishing and Product Communications), for "GAO Before GAO" (fall 1984) and Tom Pastore, Denver Regional Office evaluator, for "Effective Communication and the Winning Team" (fall 1984). Award recipients were selected from 122 nominations submitted by agency managers to GAO's Committee on Awards.

The ceremony included musical selections by the First Army Band from Fort Meade, Maryland, the presentation of colors by the Joint Armed Forces Color Guard, and introductions by William Anderson, awards committee chair and director of the General Government Division. In his remarks, Comptroller General Bowsher noted that the awardees were "but a handful of deserving employees who exemplify all that is best in the public service." He thanked the staff for their personal commitment and assured the large audience of friends, family members, and coworkers of his confidence "that, together, we will not only meet ever-demanding challenges but will surpass them, while making significant and unique contributions toward helping to resolve the concerns that face our nation."

The program for the awards ceremony, which lists the recipients and their citations, is available from Ms. Carolyn DeBruhl, awards committee administrator, at (202) 275-5374.

Ed. note: GAO staff and their colleagues in professional organizations participated in numerous international auditing events in 1985. The activities of two groups—GAO's International Auditor Fellowship Program and the Canadian Comprehensive Auditing Foundation—offer a sample of events within the international auditing community.

International Auditors' Program Completes Seventh Year

The 13 participants in GAO's 1985 International Auditor Fellowship Program (IAFP), which annually offers intensive training to government auditors from developing countries, completed their 3 1/2-month stay at GAO on October 31, 1985. The Program seeks to enhance the professional development of international audit offices and thereby support the improved financial management of developing countries. This year it celebrated its seventh anniversary.

The international Fellows learned about GAO's audit approach and the basics of operational auditing through classes, seminars, site visits, and "hands-on" practice. They studied report writing, ADP, fraud awareness, procurement auditing, statistical sampling, and control and risk evaluation (CARE) methodology. Visits to the New York Regional Office, the New York City Board of Education, the United Nations, and New York City's New School for Social Research rounded out the Program,

Comptroller General Charles Bowsher (C foreground) is shown with GAO's International Auditor Fellows including (seated, L to R) Samia Labib Egypt Mr Bowsher Abdulkader Basaffar Saudia Arabia, (first row standing L to R) Tangang Bernard Cameroon Khin Nyo Burma Laudon Nazombe Malawi Rajasekhar Rayalu India Byong-Jun Lim Korea Sabah Moosa, Oman David Mora Mexico and (second row standing L to R) Chernor Jarra The Gambia Peter Wong Hong Kong Rajendra Prasad Fiji and Nathan Karben Marshall Islands during which the Fellows also practiced training skills to enable them to share information with their home offices.

Elaine Orr, director, OIAOL, congratulates Harry Ostrow, Office of Policy, on his 1985 special commendation award for being a key instructor in the Fellowship Program each year

Scores of GAO staff participated in educational and social activities with the Fellows during their stay at GAO. In July the GAO Chapter of Blacks in Government (BIG) hosted the Fellows' welcoming reception; in October the Fellows hosted a cross-cultural display of crafts from their countries, after which staff threw a Halloween bon voyage party.

Sometimes the less formal interactions benefit the Fellows most. For example, because Byoun-Jun Lim's native Korea will host the 1988 Summer Olympic Games, he had a clear interest in the 1984 U.S. Olympics. While at GAO, Mr. Lim read an article in the *GAO Review* (spring 1985) about one staff member's summer vacation as a volunteer auditor for the Olympics. He contacted author Karl Deibel of the Los Angeles Regional Office to discuss how the Korean audit office could ensure an effective financial management review of the Seoul Olympics. Mr. Deibel explained how audit concepts were used by the Olympic Committee's internal audit staff and arranged for Mr. Lim to meet Olympic officials in Los Angeles on his trip home to Korea. This kind of networking and application of modern audit methodology is one goal of the Program. For more information on IAFP, contact Carol Codori or Alberta Tropf, program coordinators, at (202) 275-4707 in the Office of International Audit Organization Liaison (OIAOL).

Canadian Auditors Hold Sixth Annual Conference

The Canadian Comprehensive Auditing Foundation (CCAF) held its sixth annual conference on "Comprehensive Auditing: From Prototype to Production," December 1-3, 1985, in Montreal. The Foundation, together with the Office of the Auditor General of Canada (OAG), also sponsors an annual international auditor fellowship program, similar to GAO's, in which auditors from developing countries spend a year as active members of audit teams. This year's 10 OAG Fellows were among those who attended the conference, which addressed such questions as "How can professionals ensure that audits are of maximum benefit and that they directly serve the needs of audit clients?" and "What elements are important in negotiating audit scope, defining criteria, and determining effectiveness?"

The audience's diversity paralleled the diverse issues addressed in some 20 plenary and special sessions, seminars, and speeches. For example, internal auditors and representatives of public accounting firms might have attended "Microcomputers and Comprehensive Audit: New Developments," while elected officials, professional association executives, and academicians could have been debating "The Auditor and the Effectiveness Question: Moving Towards an Agreed Approach."

In addition to the formal sessions, the conference also provided a methodology display room. Here, practitioners from government and public accounting groups displayed and explained their books, audit guides, computer programs, and videotapes. GAO's display, in contrast to those highlighting current auditing and accounting practices, focused on human resource management. Conferees viewed a videotape on communications, a familiar part of GAO's "Skills for Performance and Career Development" course, practiced these skills before a camera, viewed the tape playback, and critiqued their "performance." This activity complemented a large group session in which Assistant Comptroller General for Human Resources Gregory Ahart addressed human resource management issues for auditors.

Conference proceedings and cassette tapes of individual sessions are available from the Foundation. Interested readers may contact Ms. Janet Hoffstetter, CCAF conference coordinator, 55 Murray Street, Ottawa, Ontario, Canada K1P 5P2, at (613) 236-6713.

Boston Regional Office Hosts Champion

Hale Champion, executive dean since 1980 of the John F. Kennedy School of Government, Harvard University, was guest speaker at the Boston Regional Office annual staff meeting on October 4, 1985. Mr. Champion's long and varied career has included service as press and executive secretary to Governor Edmund G. Brown of California, director of finance of the State of California, director of the Boston Redevelopment Authority, vice president of finance at Harvard University, undersecretary of the U.S. Department of Health, Education, and Welfare (now Health and Human Services), and consultant to GAO.

Mr. Champion discussed the need for better accountability in government and emphasized the importance of allowing government managers more flexibility in making decisions. He also revealed that during his tenure with Governor Brown he had considered GAO an adversary, but that as undersecretary of Health, Education, and Welfare he came to rely on GAO as a valuable asset whose accurate and reliable information helped improve government operations.

Hispanic Recruiting Conference

"Working With Management To Promote Hispanic Recruiting" was the theme of the Hispanic Employment Program Managers' (HEPM) conference, held at GAO September 9-11, 1985. HEPMs from every region and most divisions attended the conference, which was held in conjunction with GAO's observance of Hispanic Heritage Week. The keynote speaker, Assistant Comptroller General for Human Resources Gregory Ahart, addressed the need to fight stereotypes in the quest for excellent employee candidates from the Hispanic community.

Other speakers included Juan Ramirez, special assistant for the Hispanic Employment Program, Office of Personnel Management; Mario Artesiano, former president of the Hispanic Liaison Group, a GAO advisory body on Hispanic issues; and Dinah Griggsby, chief of GAO's recruiting services. The conference also featured a panel discussion among senior GAO executives that highlighted their commitment to increasing the number of Hispanics hired by GAO. Peter Espada, special assistant for special emphasis recruiting at GAO and conference organizer, encouraged the HEPMs to continue contributing to the re-

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Manager's Corner

This feature was coordinated by Rusty Glazer, management development specialist, and Ross Laguzza, management intern, both from the Office of Organization and Human Development.

Managing the Organization of the Future

Considerable attention has focused recently on the skill, creativity, foresight, and energy that will be required to manage the organization of the future. In this issue's "Manager's Corner," Nancy Kingsbury, associate director, National Security and International Affairs Division, and Neal Curtin, director, Office of Quality Assurance, review several interesting and popular books about managing in the future. Both reviewers examine the significant management concepts and principles developed in the books and explore applying those ideas to GAO's work environment.

Managing Tomorrow

Reinventing the Corporation. By John Naisbitt and Patricia Aburdene. New York: Warner Books, Inc., 1985

The Adaptive Corporation. By Alvin Toffler. New York: McGraw-Hill and Bantam Books, 1985

Vanguard Management: Redesigning the Corporate Future. By James O'Toole. New York: Doubleday & Co., 1985

Reviewed by Nancy Kingsbury

Our world is changing dramatically. Many observers believe that our lives—at work and at home—and our environment will experience more change in the next two decades than has occurred in the last 200 years. These three books stand out among a number of current works that assess trends in corporate management and predict the management environment and challenges for the future. Although all three books focus exclusively on corporate rather than government management, the trends described offer relevant insights about GAO's future and present management.

Reinventing the Corporation

John Naisbitt gained nationwide prominence as a future-oriented analyst with his best-selling book, *Megatrends*. That effort, which synthesized a broad collection of information about local and national events, hypothesized on and illustrated major trends for the future in our lives and work. *Reinventing the Corporation* (coauthored with his wife, Patricia Aburdene) expands upon the *Megatrends* themes, discussing how they affect corporate management.

The management trends identified are significant: the shift to an information-based society rather than one based on capital and hard resources; the changing workforce that increasingly involves women and minorities; the replacement of hierarchical authoritarian leadership with entrepreneurial alternatives and intuitive, visionary leadership; and the significant demand for new approaches to such matters as employee benefits programs, lifetime learning, and workplace motivation.

Reinventing the Corporation, like *Megatrends*, is a best-seller, perhaps less for its insights and anecdotes (it is enjoyable to read about corporate success stories) than for its unremitting optimism. Naisbitt's society and corporation of the future are predicated on very positive assumptions of unrelieved economic prosperity; full employment creating a seller's market in the workplace; and a society governed by the values of the baby-boom generation, which appear to be uniformly creative, energetic, confident, and democratic. His description of the future workplace is very attractive (if you share that workplace's values and meet its demands).

However, Naisbitt's book largely fails to recognize the difficulties inherent in the transition to such a nontraditional, anti-industrial environment (even if it were attainable throughout our worklife). On the contrary, the trends are discussed almost without assessment. However, his awareness of the inherent stumbling blocks appears in such disquieting asides as "unskilled people are the one obstacle to the promise of prosperity in the new information society, the one threat to reinventing the corporation." This management future exists in the present, to some degree, and the book is full of corporate innovations that are making some companies stand out as trend setters. But there is little discussion about how to nudge an established corporate culture into change, and this reader was left wondering what happened to those hardworking, experienced, hierarchically oriented workers who did not fit the intuitive, participatory, creative, computer-oriented mold of these reinvented corporations.

The Adaptive Corporation

Many of the same conclusions about the corporation of the future arise in Alvin Toffler's book, *The Adaptive Corporation*, which describes trends toward smaller, entrepreneurial management organizations; alternative workplace motivations; demands of a changing workforce; and the dominant role of information, rather than labor, raw materials, and capital, as the stimulus of production. But the history and perspective of this book, written by the author of *Future Shock* and *The Third Wave*, remain the same.

Corporation is an annotated and updated version of a previously proprietary report prepared for the American Telephone and Telegraph Corporation (AT&T) between 1968 and 1972. The work was started before the publication of *Future Shock* in 1971, and it was submitted to AT&T long before the breakup of the Bell System was seriously contemplated. At the time, it was apparently buried, only to become a somewhat prophetic underground accompaniment to the movement toward divestiture. The book's concentration on one industry, indeed one (albeit huge) corporation, gives it a less sweeping basis for its generalities about managing in the future. However, that same limited perspective permits the reader to be more aware of the difficulties presented when a major organization faces dramatic change. The author candidly discusses the things he was wrong about, which serve as helpful benchmarks of the uncertainties that accompany the implementation of change. For example, he predicted that AT&T would be operating in a heavily regulated future rather than the current anti-government, deregulatory environment.

Vanguard Management

James O'Toole's *Vanguard Management* offers a look at many of the same trends in corporate management's future. Not surprisingly, the very "vanguard corporations" described as setting those trends are many of the same management innovators that appear in John Naisbitt's book.

The vanguard includes "people-oriented," participatory, and self-confident managers who are consumer-oriented, infuse employees with a sense of stability and ownership, foster career-long training and growth, and ally themselves with entrepreneurs. Rather than describing only the upbeat and successful newly invented corporation, O'Toole also acknowledges the "negative" characteristics of the vanguard. A journalist, management consultant-turned academic, and chairman of a highly publicized 1970's federal task force on work in America, O'Toole offers some helpful advice and anecdotes on how to change a corporation, starting most critically with the observation that "effective change builds on existing culture."

The overall message about the objectives and impact of the kinds of cultural change necessary for future management seems more consistent with our society's values than Naisbitt's corporate future is. O'Toole highlights the value of moral courage in corporate change, and his "vanguard" is not preoccupied with the importance of individual self-reward and satisfaction that seems to motivate Naisbitt's corporate trend setters.

Synthesis for GAO

Taken together, these books provide a notably consistent picture of tomorrow's workplace and, to some extent, its management practices and structures. The importance of these observations to GAO staff is the awareness that the future already is arriving here. GAO lags far behind the corporate trend setters in many respects, but it is well ahead of the trends in others. GAO's extensive experience in alternative work schedules, such as maxiflex and part-time; its beginning interest in job sharing; a quite remarkable investment (by federal standards at least) in career-long training and development; and an unusual (again, by federal and, judging by these books, corporate standards) awareness of the quality of its employees' work life all suggest that GAO is undergoing an effective transition in the world of modern management.

Other trends described in these books are occurring at GAO without as much awareness. The disappearance of "middle management" in the second-level supervision of work and more direct involvement of managers in the work itself are two such trends. Presently, GAO is reorienting toward consumer (congressional) satisfaction and a reevaluation of ways to improve productivity and enhance employee "ownership" of the products. We are also exploring pay for performance. The authors describe all these trends as central to reinventing the corporation.

The authors of these books also recognize that such change is not easy. Toffler observes, "Big organizations, as a rule, only change significantly when certain preconditions are met. First, there must be enormous external pressures. Second, there must be people inside who are strongly dissatisfied with the existing order. And third, there must be a coherent alternative embodied in a plan, a model or a vision."

Most of the successful corporate evolutions described in these books exhibit those preconditions. As managers in GAO, we may need to better understand the external pressures, more positively seek solutions to the sources of internal dissatisfactions, and work together to develop and communicate our vision about the alternative future. As corny as it sounds, we are managing tomorrow today.

A Passion for Excellence: The Leadership Difference. By Tom Peters and Nancy Austin. New York: Random House, 1985

Reviewed by Neal Curtin

"Quality, above all, is about care, people, passion, consistency, eyeball contact and gut reaction: Quality is not a technique, no matter how good."[1]

In the number-one best-seller, *In Search of Excellence*, Tom Peters and his associate, Robert Waterman, cut through a lot of theory about what makes organizations successful and provided some of the most practical, real-life experience about leadership and management that anyone has been able to capture in readable form.

Now Peters has teamed with Nancy Austin to provide the definitive follow-up. A fascinating collection of anecdotes, aphorisms, and analysis, *Passion* is in many ways better than the original. It expands on many of the themes established in *Search* and goes further to provide practical tips for applying the lessons of excellent companies in the readers' own organizations. Lest you think that Peters and Austin's lessons apply only to private corporations, the story of the Tactical Air Command's turnaround in readiness is instructive. The authors tell how the sortie rate—a measure of the ability to keep planes flying—increased dramatically when the commander took a number of measures aimed at getting maintenance personnel to take "ownership" of their operation and to feel the same pride that pilots do at carrying out a successful mission.

Or how about the City of Baltimore, where long-time mayor Donald Shaefer's leadership and energy has sustained an excellent record. *Passion* tells of one instance when Shaefer wrote a note to the Streets Department saying that he had hit a pothole while en route to work that day. "Find it and fix it," he told the Department. Several thousand potholes were filled in the next 2 days!

Do not dismiss this "business" book too lightly. The lessons apply not only to businesses of all sizes but also to public service organizations and virtually all government agencies. Indeed, many of the principles discussed in both of the "Excellence" books would serve readers well in their dealings with family and community. *Passion*'s 21 chapters are divided into five sections, including "Common Sense"; "Customers"; "Innovation"; "People, People, People"; and "Leadership."

Each of those sections brims with insight and practical examples of success. In the following paragraphs, I will discuss two particularly useful principles as well as the chapter that is my favorite (perhaps for obvious reasons), "Quality Is Not A Technique."

Management by 'Wandering About'

If you read *Search* or any of several other management books in recent years, you know about MBWA, that is, "management by wandering about." Peters and Austin call MBWA a "blinding flash of the obvious" and claim no particular discovery of great truths. However, they devote several chapters to the concept, and *Passion* begins and ends with a forceful call for managers to go forth and wander, to get out of that office and talk to employees, customers, peers, suppliers, or anyone who can help shed light on ways to provide better products or services more efficiently. MBWA, which can be quite formal and systematic, can include regularly scheduled visits to plants, audit sites, customers. Or it can be informal and almost haphazard. But two things are certain: You have got to leave your office to do it, and the most important part of it is listening when you wander.

In GAO, MBWA should probably start right outside the group or associate director's door. Merely by dropping in on some of the cubicles or lingering around the coffee pot, a manager can reap a treasure trove of information about employees' concerns. It can also be an opportunity to give some feedback about jobs or about group operations.

The importance of feedback, even in such an informal setting, cannot be overstated. At a recent training program at the Center for Creative Leadership, the participants—mostly middle managers—were asked if they thought they received enough feedback from their bosses. No one said yes. The instructor assured us that if we felt that way, the people who worked for us also felt that way about us! MBWA can help provide more opportunity for feedback.

MBWA, GAO-style, should also include regional offices. It is difficult for regional office staff to experience leadership from Washington if they rarely have a chance to see, talk with, and listen to group, associate, and division directors. Frequent visits with regional office staff and managers should be a part of every Washington manager's MBWA agenda.

Maybe the most important MBWA technique we can use in GAO is with our customers—members of the Congress, chairs of committees, and staff on the Hill. While we probably do not want to think of our meetings on the Hill as "wandering about"—the Office of Congressional Relations is cringing—we do need to build a better understanding of our customers and their varying needs. We do not prepare products for some monolith called "the Hill." Our reports, while written to be understood by a wide audience, must be tailored to the specific needs of the customer. And with our expanding product line, including briefing reports, fact sheets, and videotape reports, it becomes even more important that our managers spend time listening to the customers.

Innovation

You cannot get very far in *A Passion for Excellence* without reading about innovation. It is mentioned in chapter 1 and in just about every chapter after that, and an entire section is devoted to it in the middle of the book. Along with *care of customers* and *turned-on people*, *constant innovation* is one of the three pillars of the model constructed by Peters and Austin.

The excellent organizations studied by Peters and Austin and Waterman all shared a common trait: They not only fostered innovation, they insisted on it. They celebrated successful innovations shamelessly and, in most cases, they even celebrated *unsuccessful* innovations. The only failure these companies saw was a failure to try something new. They believed that the creative juices must *continually flow* through the organization.

Is such an environment of innovation possible in a government bureaucracy? Of course it is, and in many ways that is what GAO's operations improvement program is all about. The program was begun in 1985 as an internal initiative to seek out and pilot innovative approaches to GAO's work and help make its operations more responsive to congressional needs. It is a way to stir up some of that creativity that may not have had a regular outlet for expression in GAO. It should lead to innovations in staffing and managing jobs, in preparing products, in identifying new types of products, and in streamlining our internal administrative operations. The ultimate measure of the program's success may be its ability to create a *sustained attitude* throughout GAO that innovation is not only tolerated, it is vital.

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[1] *A Passion for Excellence The Leadership Difference*, p 98

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Topics in Evaluation

035945

Carl E. Wisler

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This issue's topic is generalization.

Judgments and decisions are often made based on uncertain information. This maxim applies to government policymaking as well as to day-to-day affairs. One way we may face uncertainty is in trying to make a judgment or reach a decision about a situation of broad scope when we possess only limited information. Thus, we are uncertain whether our knowledge of the particulars applies to the broader situation. This is the problem of generalization, and it occurs frequently in GAO audit and evaluation work.

Can the number of unemployed people in the United States be reasonably estimated from a sample of 3,000 citizens? Can the toxic effects of saccharin on humans be extrapolated from an experiment on rats? Can the effects of next year's compensatory reading program be predicted from the results of an evaluation performed 5 years ago? Although policymakers are not in a position to know the true number of unemployed people in the United States, the effects of saccharin on humans, or the consequences of next year's reading program, they must behave as if they do. To assist them in doing so, GAO often draws generalizations from information that is available but that, in some degree, does not apply to the situation for which conclusions are needed. In this article we examine some important considerations in generalizing from the empirical work that we do.

The New Jersey-Pennsylvania Negative Income Tax Experiment

In the 1960's, some economists, notably Milton Friedman and James Tobin, began proposing reforms to the welfare system in the United States. One such proposal suggested that the government provide a guaranteed income when a family's earned income was zero and that a graduated "negative income tax rate" be applied as the family's earned income increased. Under the negative tax rate, government benefits would be reduced gradually as income rose to a "break-even point," where government benefits would cease. At higher income levels, the customary positive income tax rate would apply.

The negative income tax had several presumed advantages, including a positive work incentive, because, unlike benefits under the existing welfare system, government subsidies would not be reduced dollar-for-dollar as earned income rose. However, the proposal was controversial because such a program would probably cost more, the exact amount depending upon the values set for the guarantee level and the tax rate and upon the behavioral response of families eligible for the program. Concerns also existed that some working individuals might reduce their work effort and subsidize their new leisure with program benefits or, in the extreme, they might choose to exert no work effort and subsist solely on the guaranteed income. The collective work response to a negative income tax was not clear from either economic theory or limited empirical data.

Hoping that additional empirical data might provide policy guidance for a new income maintenance system, the federal government initiated a series of experiments. The first of these, the New Jersey-Pennsylvania negative income tax (NIT) experiment, was planned by the Office of Economic Opportunity in 1966 and 1967 and implemented from 1968 to 1972. The NIT experiment illustrates several points about generalization issues as they apply to evaluation and auditing.

About 1,300 families in Trenton, Paterson-Passaic, and Jersey City, New Jersey, and in Scranton, Pennsylvania, were enrolled in the experiment and interviewed quarterly and annually to obtain information about such particulars as earnings, hours of work, expenditures, and family composition. About half the families were randomly assigned to a control group; the others were randomly assigned to one of eight experimental groups that differed by guaranteed income level and negative tax rate. When families in the experimental groups dropped below the break-even point, they received a government payment.

The experiment was designed to answer several questions about how much a negative income tax program would cost and how it would affect work response, health, attitudes toward life, educational efforts of adolescents, and other variables. (This statement of purpose is an oversimplification; for a detailed discussion of the experimental purpose, see Rossi and Lyall, 1976.) For illustrative purposes, we will focus only on a policy question about work response: What effect would imposing a negative income tax have upon the work response of low-income people in the United States?

Generalization Issues

The ability to generalize from observed sample units to population units is a common issue in evaluation and audit work. We have to decide whether we can correctly apply information we have about a sample to some larger group of units about which we do not have direct information. However, several additional issues are involved in reasoning from what we know about to what we would like to draw a conclusion about. Put in terms of our evaluation question, the units are one element about which we want to generalize, but three other elements are also of concern: the intervention, the constructs/measures, and the setting (see Table 1). We will consider each of these elements for our illustrative policy question.

Breaking out the four elements of our question, we want to say something about the work-response effects (constructs/measures) of a negative income tax program (intervention) on low-income families in the United States (units) at some place and time in the future when such a program might be implemented (setting).

Table 1

Generalizations Along Four Dimensions

Question elements	Domain about which conclusion is wanted	Instances on which data were collected
Units	Low-income households in United States	Volunteer households in New Jersey and Pennsylvania that met eligibility criteria and stayed in the evaluation over a 3-year period
Intervention	Negative income tax	Eight combinations of guaranteed income level with tax rate in the context of particular administrative procedures
Constructs and measures	Work response of labor supply	Household response to interview items about income earned and hours worked
Setting	United States at some future time	Selected localities from 1968 to 1972

Units

Unit generalization (this is what Bracht and Glass, 1968, call population validity) is strongest when we make observations on a probability sample from a population about which we want to draw a conclusion. In designing the NIT experiment, this would have meant drawing a nationally representative sample of low-income families. A decision was made not to select such a sample but instead to do "test bores" in four communities. Thus, volunteer families living in four New Jersey and Pennsylvania cities became the sample units. Further constraints were imposed upon the sample by restricting it to work-eligible, male-headed families. The unit-sampling decision, while not necessarily a bad one, was one of a series of trade-off decisions that severely limited the extent to which the NIT results can be generalized to populations of policy relevance. The work response of work-eligible, male-headed families in four northeastern cities may well be different from the response of other family configurations in other parts of the country and, therefore, may not be a good guide for national policy. (Subsequent NIT experiments in other locales helped to broaden the applicability of the results.)

Intervention

When we turn to the intervention involved in the NIT experiment, similar questions about our ability to generalize arise. Actually, the experimenters tried eight different policy variations, but that is not the point here. What we need to examine is how well an intervention that was actually implemented corresponds to an intervention we want to draw conclusions about.

For example, in the NIT experiment a particular method was devised for determining the monthly payments due to participating families and for making the payments. The NIT payment method was evidently more sluggish in responding to changes in income than the existing welfare system and was operated with less opportunity for discretion by the providers of benefits. Although the basic features of an operational negative income tax—the guarantee level and the tax rate—may be the same as those tested in the experiment, the way the negative income tax is administered may be quite different. Therefore, we have to be concerned about whether the intervention as implemented for the

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Underestimating the Costs of Major Weapon Systems: Are Reforms on the Way?

035946

William W. Crocker III

The Department of Defense's (DOD's) highly publicized history of consistently understated weapon systems cost estimates during the past 40 years has caused considerable debate. Dramatic increases in defense program costs since 1980, rising deficits, and the possibility that defense program costs may continue to be significantly understated have become serious congressional concerns.

Last year, several members of the Senate committees responsible for budgeting, authorizing, and appropriating for the nation's defense, led by Senator Charles Grassley of Iowa, asked GAO to conduct an independent assessment of the procurement portion of DOD's Five-Year Defense Plan (FYDP). The senators believed that, to acquire the procurement quantities sought by DOD, the United States would have to spend much more than the $555 billion in total procurement currently programmed in the 5-year planning document.

To test the validity of this perception, GAO examined 97 major weapon systems procured since 1963 to establish the extent to which their costs were underestimated and the likelihood that such underestimates will continue. This article discusses cost growth in weapon systems procurement, the probability of reform, and possible future developments in the area of defense procurement.

Documenting Cost Growth

In 1961 Secretary of Defense Robert McNamara established the Program Planning and Budgeting System (PPBS) as the new accounting and planning structure for DOD, thereby initiating major and lasting reform to the DOD accounting and budgeting process. The most important of the new management tools within PPBS was the FYDP document, which provides a record of past and current costs and projects this information far enough ahead to enable the Secretary of Defense to (1) estimate the future consequences of today's decisions to change the size or composition of the armed forces and (2) field new weapon systems. (While the FYDP contains force and financial data useful in planning the size of fighting forces and projecting the associated costs of all DOD activities, this article focuses only on the acquisition of major weapon systems.)

Although the FYDP structure for assembling explicit program costs was developed in the early sixties, doubts remain today about its ability to accurately predict future costs. In 1971, Alain Enthoven reflected on the implementation of PPBS during his tenures as Deputy Comptroller of DOD from 1961 to 1965 and Assistant Secretary of Defense for Systems Analysis from 1965 to 1969: "Obtaining relevant cost information. . .turned out to be a very difficult task, and there is still considerable room for improvement. The difficulty of estimating the cost of new equipment, and the tendency for gross underestimates, persists and is well known."[1]

Despite DOD's many attempts to improve the accuracy of weapon systems cost estimates, we found that Mr. Enthoven's statement is as true today as it was 15 years ago. An obvious question arises: Why does the cost-growth problem persist decade after decade? Before answering this question, let us take a brief look at our data analysis to help put the issue in perspective.

[1] A C Enthoven and K.W Smith, *How Much Is Enough? Shaping the Defense Program, 1961-1969* (New York: Harper and Row, 1971), p 51.

Costs Exceeded Estimates, 1963-1982

To establish the size of the cost-growth problem, GAO reviewed FYDP records from 1963 to 1982, attempting to include all major weapon systems procured for at least one 5-year period. The total sample included 40 aircraft, 36 missiles, 9 tracked vehicles, and 12 ships.

Figure 1 shows actual costs compared to estimated costs, the dollar amounts for each year accounting for the total acquisition costs for the weapon systems in the sample for the next 5 years. For example, in 1977, DOD estimated weapons would cost $70 billion during the period 1978 to 1982. The actual amount appropriated during that period was $90 billion.

Throughout the 20-year period, appropriations consistently exceeded funding estimates. On the average, 32 percent more funding was provided for the systems than had been projected by DOD in the FYDPs.

Quantities Not Achieved

Even with 32 percent more funding than planned, DOD has not been able to purchase all quantities originally specified in the FYDPs. Figure 2 compares the additional funding that would have been required to purchase the planned quantities (the actual unit cost multiplied by the planned number of weapon systems)[2] to the FYDP projections. Since the late sixties, this pattern of purchasing fewer quantities despite receiving more money than planned has progressively worsened, and the gap between FYDP estimates and full procurement funding requirements has widened.

Figure 3 compares DOD's FYDP projections, actual funding appropriated, and estimates of funds that would have been required to buy the full procurement. Note that since about 1970 the funding provided to purchase major weapon systems, while substantially more than DOD had estimated, has been insufficient to purchase the planned quantities.

Apparently, a systematic bias toward underestimating program costs has become a part of the procurement process. If the historical trends indicated above are accurate predictors, the Congress will likely continue to appropriate more dollars for fewer major weapon acquisitions than proposed in FYDPs.

Figure 1 Actual Procurement Funding versus FYDP Projections (current dollars)

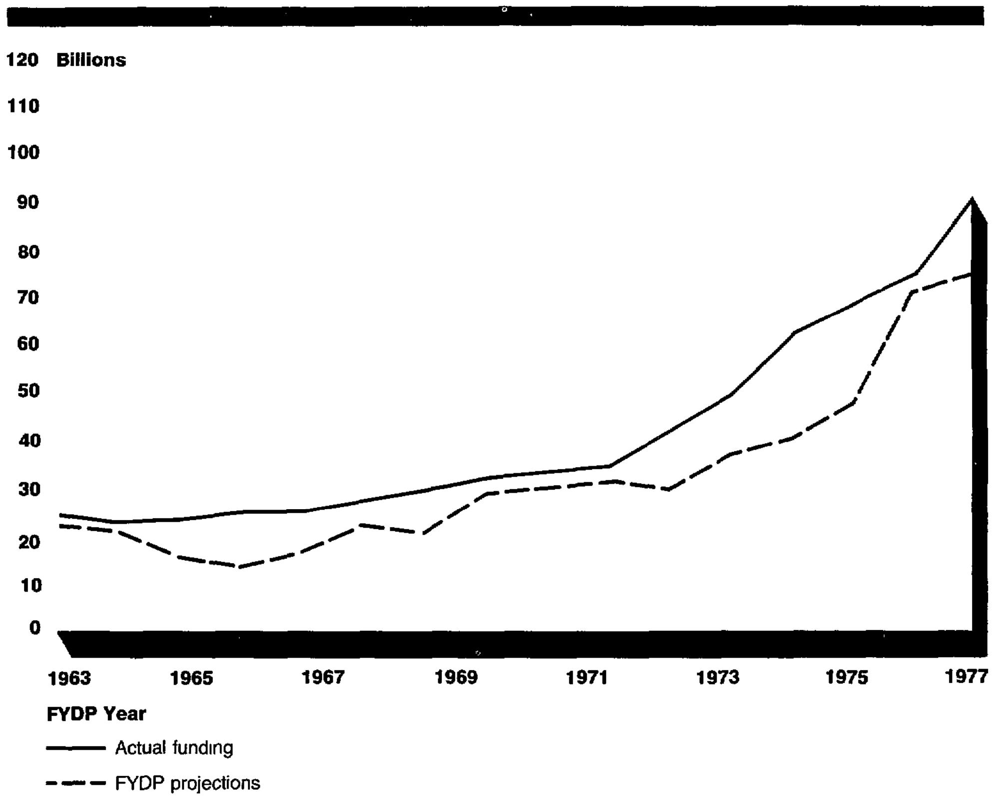
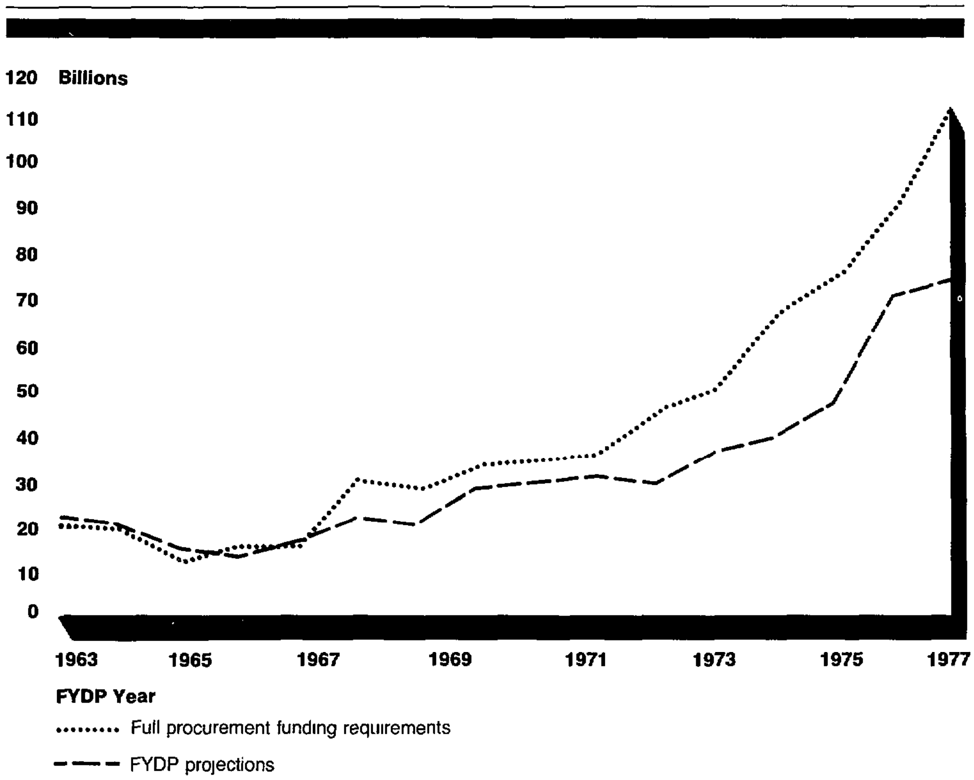


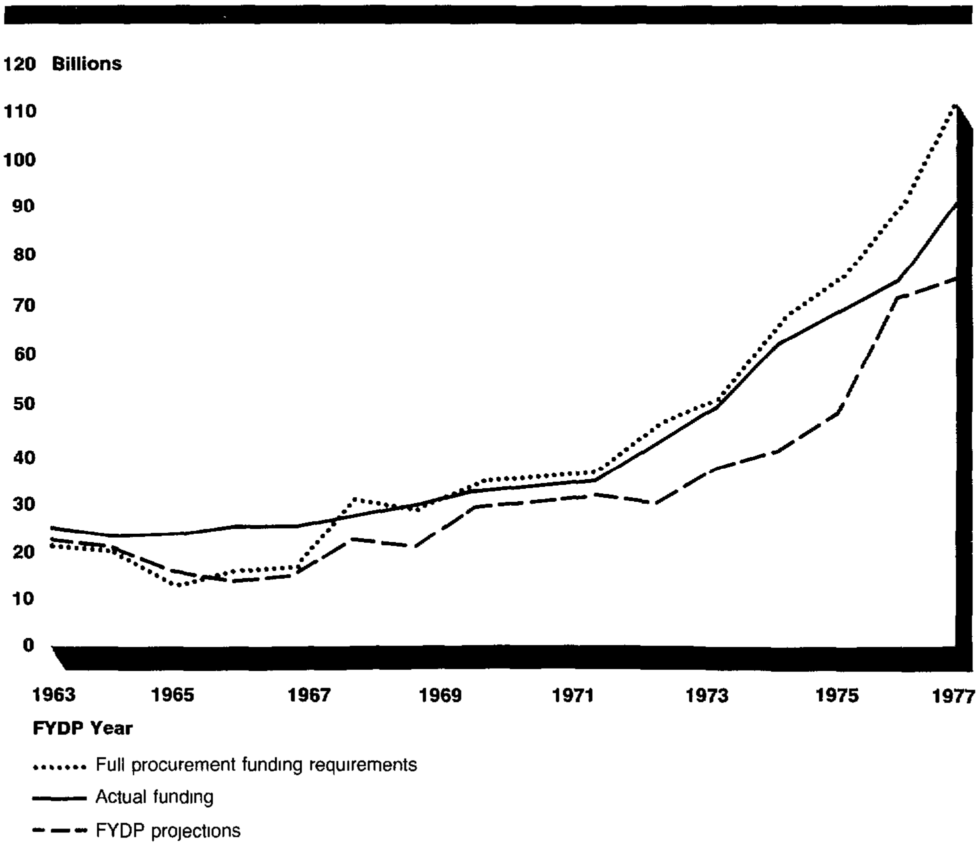
Figure 2 Full Procurement Funding Requirements versus FYDP Projections (current dollars)



On balance, the peacetime military weapon systems acquisition process almost always has been characterized by programs that

[2] This line is an approximation, since some economies might have been achieved if this level of funding actually had been available.

Figure 3 FYDP Projections, Actual Procurement Funding, and Full Procurement Funding Requirements (current dollars)



take longer, cost more, and buy less than originally planned. In December 1980, DOD's Selected Acquisition Report cited average cost growth at 129 percent. More recent DOD reports show a much lower rate of cost growth. Data from other studies will vary, depending upon the time span being addressed. As stated above, our analysis shows that, over the long term, the Congress has only been willing or able to provide an average increase of about 32 percent over original cost estimates. But at the current level of procurement programmed (about $100 billion per year) a 30-percent surcharge may be catastrophic.

Reasons for Cost Growth

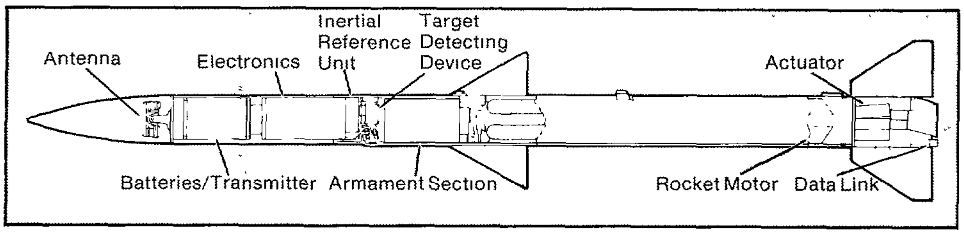
Accurately forecasting program cost is always difficult. Of the many variables that contribute to unplanned cost overruns, the most frequent culprit is overoptimism in program planning and cost estimating. The promise of a brighter future is a hallmark of our political process, and, consequently, administrations rarely project increasing deficits, inflation, and interest rates or declining growth in revenues and gross national product. Even in prosperous times, most planning is done on the assumption that the overall economy will continue to improve. Making planning decisions on this basis is not necessarily a deliberate attempt at deception but usually an expression of what every administration hopes will happen. Human nature being what it is, most of us—including members of the Congress and the general public—share in this optimistic outlook. This group psychology helps create budgets and out-year cost estimates that do not adequately recognize the uncertainties that affect any long-term project, particularly one as complex as developing and producing a new weapon system.

But what, besides general "optimism," are the other causes of cost growth? First, there is great temptation, and frequently some pressure, at DOD to use official planning factors when estimating program costs. For example, cost analysts regularly establish the *realistic minimum* cost for a program based on program manager input that, year after year, assumes program stability. But program stability assumes that most or all factors contributing to cost growth will not occur; since this is not a reasonable assumption, this practice leads to artificially low estimates.

A second official planning factor, learning-curve cost discounts, also causes problems. That is, cost analysts assume that the more one produces, the less additional units cost. At the time of GAO's study, DOD was projecting cost declines in approximately 80 percent of its weapon system programs. Surely, cost efficiencies are realized as each production process matures, but learning-curve factors cannot be applied in isolation: Many factors drive cost up, often negating learning-curve cost declines. As a whole, a model that projects declining future costs for sophisticated weapon systems produces an inaccurate picture of budget requirements.

Such factors as rapidly advancing military technology and an environment of uncertainty can also increase costs of weapon systems. Still other well-known and persistent cost-growth factors are changes in the following:

- **the economy**—differences between the actual inflation rate and the original estimate of the inflation rate;
- **the quantity ordered**—fluctuations in the number of systems or integral components to be procured;
- **engineering**—alterations in the physical or functional characteristics of the system;
- **support requirements**—variations that affect ancillary equipment, training, and testing needed;
- **schedule**—accelerations or delays in procurement schedules at any point in the process; and
- **estimates**—correction of errors in preparing the original estimate or refinements of prior estimates as the system's definition becomes more precise.



Cost growth continues to plague the Advanced Medium-Range Air-to-Air Missile (AMRAAM) program Since 1978 the cost of one AMRAAM missile has risen from $68,000 to $166,000 in constant dollars The 1984 current dollar cost was $292,000 per missile Total program costs for 24,335 missiles could exceed $10 5 billion.

Still other, even more unpredictable influences include strikes, embargoes, severe weather, and fire.

Little Chance for Reform

DOD is not alone in its optimism regarding cost estimates. Program advocates within the Congress, the defense industry, and even the general public share in this optimism. Anxious to start new programs, they tend to be highly optimistic about costs, technical problems, and operational characteristics. As noted above, this optimism (or human nature) translates into artificially low cost estimates that must eventually be adjusted upwards as "unforeseen" problems occur. These low estimates, known as "buy-ins," occur because the normal factors contributing to cost growth have been treated as "unforeseen" when, in fact, although the exact nature, timing, and magnitude of any one factor may be unforeseen, it is probable that some costly changes will be required. The cycle set in motion by underestimated costs is not likely to change unless we change the way we do business in this country.[3] This would, of course, mean major reform, which is unlikely for several reasons.

The Congress and Buy-Ins

First, the Congress has been very permissive of buy-ins. When weapon system costs exceed the budgeted amount for a given year, DOD procures fewer weapon systems than planned. Then, because the Congress and DOD are counting on the additional weapon systems, the Congress "stretches out" the program (authorizes extra money to allow production to continue) until the planned quantities are achieved. Because stretch-outs are relatively easy to obtain, major defense contractors can be less concerned with mismanagement and inefficiency. Additional cost resulting from mismanagement and inefficiencies in these cases can be obscured within those cost growth factors, listed above, that have become somewhat more acceptable.

The Inflation Factor

A second reason that major reform is unlikely involves unanticipated inflation. In some cases, cost analysts simply do not anticipate rising inflation. Frequently, however, the probable inflation rate is recognized but not fully factored into weapon system estimates. Neglecting to plan for inflation has contributed considerably to weapon systems cost growth, particularly for those systems that become stretched out beyond the original planning period. Unfortunately, this problem is not easily remedied, as illustrated below.

During periods of rising inflation, the anticipated inflation rate for the out years in DOD budget projections is usually more optimistic (i.e., lower) than that projected by independent economists. If DOD were to use the greater, independent inflation rate in its cost estimates, the FYDP price tag would increase considerably but, perhaps, be more realistic. So, if the independent figure is deemed more realistic, why not use it and eliminate a good portion of the cost-growth controversy?

Given that a goal of most administrations is to reduce inflation, it follows that their budget estimates must incorporate the rate of inflation they plan to achieve. To contend that budget estimates may not accurately reflect current or independently projected inflation rates misses the point. The administration's estimates are designed to reflect (and even affect) the inflation rates to be achieved by its overall economic plan for the country. A president (or even the Congress) cannot be expected to propose an economic plan designed to reduce the rate of inflation and, at the same time, approve budget estimates that do not conform to the expected results of that plan. So we are back to square one. When inflation is rising, therefore, the U.S. government will most likely continue to absorb the unplanned portion of the cost by purchasing fewer quantities in the proposed timeframes and stretching out the rest to be dealt with in future budgets. But failing to account properly for declining inflation rates can also be a problem. In light of the high inflation of the 1970's, Deputy Secretary of Defense Frank Carlucci proposed that DOD "budget for inflation" for major weapon systems. In the fall of 1981, the Office of Management and Budget (OMB) granted an exception and permitted DOD to project inflation for major weapon systems at 1.3 times the anticipated economy-wide inflation rate.

Apparently, this exception was considered a relatively "easy fix," given the recent history of rising inflation. But GAO has not been able to obtain any convincing justification from OMB or DOD for using the 1.3 factor. In fiscal years 1983 through 1985, DOD applied the 1.3 inflation multiplier to its cost estimates and, when inflation began to decline, found itself unable to use funds at the rates estimated when the funds were requested and appropriated. Since fiscal year 1983, the special multiplier used for major weapon systems has accounted for $9.2 billion in excess funds.[4] GAO estimates that DOD's continued use of the 1.3 inflation multiplier in fiscal year 1986 will result in an additional $3.5 billion in excess funding. The inflation multiplier, then, has exacerbated problems with the acquisition process. But, even if it had worked as it was intended, it would not have addressed enough of the structural problems in cost estimating to signal reform.

DOD Improvement Initiatives

Since the McNamara era, DOD has engaged in numerous management improvement programs, cost reduction initiatives, and other efforts to achieve better accountability for funds. Most of these efforts are commendable and should be continued because they provide the essential economies and efficiencies that are the responsibility of all federal departments. Keeping these initiatives in perspective, however, is important.

Table 1 lists the April 1984 estimated savings projected for the major components of DOD's cost-saving program from 1981 to 1989. Some of these claimed savings will be realized, but they do not, as in the case of the inflation multiplier, qualify as reform, since they do not change the way cost estimates are developed or otherwise alter the political environment in which major programs are developed and procured.

Furthermore, these estimates represent forecasts of what DOD would like to have happen, not actual achievement. Approximately $19 billion of the $34 billion in claimed potential savings comes from cancelling or reducing marginal programs that usually fall into one of two categories: (1) systems that were not going to be built anyway or (2) existing systems for which the Congress would not continue funding at DOD's planned levels. In either case, since DOD generally decides what not to

[3] On February 28, 1986, the President's Blue Ribbon Commission on Defense Management presented its interim report. The Commission made several recommendations that, if implemented, would change the weapon system acquisition process. It is too early to know how the recommendations will fare, but some clearly have the potential to enhance program stability and reduce costs.

[4] "Potential for Excess Funds in DOD" (GAO/NSIAD-85-145, Sept. 3, 1985), p. 2.

See Costs, p. 55

International Tax Administration

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Most of us are aware of the efforts of the Internal Revenue Service (IRS) to administer the tax laws. These efforts include ensuring that taxpayers file tax returns, report all the income they receive, and pay their taxes on time. While we are familiar with the compliance problems that IRS must overcome domestically, few of us realize how these problems are exacerbated in the area of international tax administration.

In recent years, GAO has performed much work on issues related to international tax administration. We have traveled to Austria, Canada, England, France, Mexico, the Netherlands, the Netherlands Antilles, Switzerland, and West Germany to gather data and meet with government and private-sector tax experts. Our work has resulted in testimony before the Congress as well as several reports.[1]

During the course of this work, it has become increasingly clear to us that international tax administration poses formidable obstacles to IRS' compliance efforts. In an attempt to shed light on this little-understood component of GAO's work, this article briefly explains some of the complexities involved in overseeing international tax administration.

Income Tax Treaties

Domestically, taxpayers and IRS generally are concerned with the tax laws prescribed in the Internal Revenue Code. International taxation, however, involves not only the Code but also foreign tax laws and the provisions of numerous bilateral tax treaties.

Currently, the United States is a party to 34 income tax treaties. Treaty partners range from major trading partners, such as Canada, France, the United Kingdom, and West Germany, to countries with whom our ties are less strong, such as the Soviet Union, Malta, and the Netherlands Antilles. The Department of the Treasury's international tax counsel is responsible for negotiating tax treaties, which must be ratified by the U.S. Senate. Generally, a treaty remains in force until one of the parties decides to terminate or renegotiate it.

Income tax treaties are usually designed to (1) relieve taxpayers from being taxed twice on the same income (double taxation), (2) establish mechanisms for resolving tax-related disputes, and (3) prevent tax avoidance and evasion through exchange of information.

Eliminating the double taxation that occurs when two different countries impose and collect taxes on the same income is an important focus of tax treaties. For example, because the United States taxes its citizens and residents on their worldwide income, a U.S. citizen living in Great Britain might be taxed by both the United States and Great Britain on income earned in Great Britain. Most countries, however, impose taxes based on residence; i.e., citizens of one country earning income while residing in another are expected to abide by the tax laws of the country where they reside.

Tax treaties reduce the possibility of double taxation, considered an undesirable barrier to international trade and economic development, through a system of exemptions, reduced tax rates, and credit provisions. In cases in which a taxpayer is taxed twice on the same income, an administrative mechanism permits the taxpayer to apply for an adjustment, which may result in a credit or a refund.

Tax treaties are also designed to prevent tax avoidance and evasion through the mutual exchange of tax information. With the exception of the treaty with the Soviet Union, all U.S. income tax treaties establish policies and procedures for exchanging tax information. In addition, some treaties provide for reciprocity in tax collection. However, even with exchange agreements, IRS is extremely hard-pressed to collect the detailed information necessary to enforce compliance in the international tax area.

GAO has only recently gained access to detailed tax information exchanged under income tax treaties. Because of congressional interest in having GAO undertake audits requiring tax treaty information, such as audits of IRS' international enforcement activities and IRS' administration of tax treaties, the Senate Committee on Foreign Relations advised the Secretary of the Treasury to include language in all new and renegotiated tax treaties that would give GAO access to tax information provided by foreign governments. In fact, since 1981 every tax treaty the Senate has ratified provides for GAO's access to tax information, and GAO currently has access to tax information under nine income tax treaties.

Difficulties With Foreign Tax Information

As mentioned previously, most income tax treaties to which the United States is a party include provisions for the mutual exchange of tax information. Some of the information IRS receives from its tax treaty partners concerning income earned in those countries by U.S. taxpayers is useful and is processed through IRS' regular compliance programs. However, about one third of the tax information documents that IRS receives from treaty partners concerning individual taxpayers cannot be used. Moreover, IRS does not receive information on all foreign-source income earned by U.S. citizens.

One shortcoming associated with foreign information documents is that IRS cannot process many of them. For tax year 1982 returns, for example, 230,400, or 34 percent, of the 680,500 documents IRS received could not be processed because the documents were (1) incomplete (for example, they contained no taxpayer identification number) or (2) received too late to be processed as part of IRS' current year's Information Returns Program.

In some cases, foreign institutions have no incentive to collect relevant tax information that can be used by IRS. For example, foreign banks are not concerned with obtaining taxpayer identification numbers because they do not consider it their responsibility to administer U.S. tax laws. Further, requiring investors to provide identification numbers runs counter to most countries' desire to attract foreign investment: Foreign banks believe that requiring such information would cause foreign investors seeking anonymity to take their investments elsewhere.

Another limitation of the information exchange provisions is that treaty countries generally are not required to supply information that is not collected in the normal course of their tax administration activities. Thus, the tax information IRS receives does not necessarily reflect all foreign-source income earned by U.S. taxpayers.

For example, in order to attract foreign investment, interest paid on deposits made in certain foreign currencies (such as U.S. dollars or Swiss francs) is exempt from French tax. Because France imposes no tax on these earnings, French financial institutions are not required to routinely report information concerning these accounts to French tax authorities, making it difficult for IRS to detect U.S. taxpayers receiving interest income from French financial institutions.

While virtually all U.S. tax treaties contain exchange-of-information provisions, only 17 treaty partners actually provided tax information documents to IRS for tax year 1982. Generally, this was the case because either the countries collected little tax information for their own purposes or their tax administration systems lacked the level of sophistication needed to generate such information.

Tax Havens

So-called "tax haven" countries, such as Panama, the Bahamas, and the Cayman Islands, pose additional enforcement problems. Tax havens generally (1) impose a low tax rate or no taxes at all on certain (or all) categories of income, (2) offer a high level of banking or commercial secrecy, (3) rely on banking as an important segment of their economy, (4) have modern communications facilities, (5) do not impose currency controls on nonresidents, and/or (6) promote themselves as tax havens.

Low tax rates on certain types of income are a strong inducement for individuals and businesses to carry out legitimate economic and financial activities in tax haven countries. Beyond that, such countries generally impose few currency controls, so investors have unrestricted access to their funds. Thus, businesses and individuals frequently have good reason to make use of tax havens for legitimate purposes.

On the other hand, because tax havens have banking and commercial secrecy laws, they also present significant criminal opportunities. Specifically, tax havens can be used both to abuse the tax system by evading taxes on legally earned income and to conceal the financial transactions associated with illegal activities, such as drug trafficking. For example, a tax haven such as Panama supplies the United States with little or no information on financial transactions that take place in that country, thereby fostering tax crimes and nontax criminal activities, such as the laundering of funds derived from illegal activities. While the extent of illegal use of tax havens cannot be readily quantified, IRS and others estimate that tax evasion through the use of haven countries is costing the U.S. Treasury billions of dollars annually.

IRS Compliance Activities Abroad

Based on the concentration of U.S. citizens residing abroad, among other factors, IRS has established offices in 15 foreign cities. The territory covered by a foreign post generally includes several countries. For example, the IRS office located in London also is responsible for the Scandinavian countries, and the Johannesburg, South Africa, office covers most of the countries of Africa. The approximately 45 employees who work at these offices are responsible for administering and enforcing U.S. tax laws that apply to the over two million Americans who live abroad.

The duties and responsibilities of the IRS officials assigned to the overseas offices include the entire range of IRS tax compliance functions: examining tax returns, collecting taxes, and providing services to taxpayers; conducting specialized investigations to support domestic examinations and criminal cases; suggesting improvements in procedures concerning tax treaties, law, and administration; and serving as liaisons with foreign tax authorities in both tax treaty and nontreaty countries, where they apply treaty provisions and for-

[1]See bibliography

eign tax laws to U.S. citizens abroad and, conversely, U.S. tax laws to foreigners.

The IRS officials overseas are assisted by domestic IRS agents assigned to the foreign posts on a temporary basis. These temporary assignments can involve the various compliance functions, but generally they concentrate on collecting delinquent taxes.

IRS officials must work within the sometimes limiting constraints imposed by the host jurisdiction, even when a case involves a U.S. citizen. For example, some countries allow IRS officials to visit U.S. citizens at their foreign residences, while other countries absolutely prohibit personal contact by IRS officials. In either case, the IRS officials must be cognizant of the political sensitivities associated with collecting U.S. taxes in a foreign country.

In addition, the enforcement powers of IRS' overseas officials are limited, especially in comparison to those of their counterparts who work in the United States. For example, IRS officials who work on collection cases overseas cannot place liens on or seize property located in a foreign country, nor can they levy wages and salaries derived from foreign sources. Therefore, unless the officials can identify either assets located in the United States or a U.S. source of income (dividends, interest, wages, etc.), they have, for all practical purposes, no enforcement tools available. In such cases, the IRS officials can only rely on the power of persuasion.

Although restricted in what they can do, IRS' overseas staff administer the U.S. tax laws quite effectively. In fiscal year 1984, for example, IRS collected over $31 million in taxes and penalties from U.S. taxpayers overseas. In the future, the Treasury will try to negotiate treaties containing provisions that are more beneficial to tax enforcement and administration. Also, through working with foreign governments, IRS will try to create better international relationships that will, in turn, result in more cooperation and fewer constraints for IRS' overseas staff.

Differing Tax Systems

The U.S. tax system differs from the systems used in many foreign countries. These differences vary from the manner in which tax evaders may be punished to the way an individual's tax bill is calculated. For example, tax evasion as we know it is not a criminal offense in other countries, such as Switzerland. Consequently, tax evasion cases that do not involve fraud or some other internationally recognized criminal activity usually are not pursued by the IRS outside the United States because of the special problems of coordinating a criminal investigation with foreign officials charged with enforcing laws in conflict with ours.

Another difference between the U.S. tax system and those of other countries is that the United States' tax enforcement and administrative mechanisms are extremely sophisticated and encompassing. Most countries continue to cope with large amounts of paper documents, unaided by data processing equipment. While many developed countries are increasing their reliance on computers, their systems and mechanisms are still primitive when compared with those of IRS.

On the other hand, tax administration in some countries is aided by the fact that their systems are less adversarial than ours. Indeed, in some countries local tax inspectors are well-regarded members of the community.

The self-assessment aspect of the U.S. tax system is alien to most countries. U.S. taxpayers are expected not only to complete their income tax returns but also to compute their tax liability and pay whatever tax is due. In contrast, most other countries require taxpayers only to provide certain tax information to their local tax authorities who then calculate the tax liability and bill the taxpayers for any tax due. Most foreign taxpayers are subject to tax withholding systems; unlike U.S. taxpayers, however, they cannot take advantage of the wide array of credits and deductions that affects their final tax liability. Consequently, the taxes withheld from foreign taxpayers' salaries are generally sufficient to satisfy their total tax liability.

Summary

The job of IRS in the international tax administration area is a difficult one because (1) the provisions of bilateral income tax treaties with 34 countries must be considered in conjunction with U.S. and foreign tax laws in determining tax liability, (2) the foreign information needed to verify reported income and deductions is difficult—in some cases impossible—to obtain, (3) IRS' international compliance programs and activities are more time-consuming and costly to conduct than their domestic programs and activities due to geographic constraints and the lack of enforcement powers, and (4) traditional audit and investigative practices frequently clash with foreign governments' interests and laws.

IRS, the Treasury, and the Congress recognize the need to improve international tax enforcement and prevent the potential loss of billions of dollars in tax revenue. One attempt to improve enforcement has already been initiated: Recognizing the unique role GAO can play in this area, the Congress has requested that GAO be provided access to tax information obtained by IRS from treaty partners. Perhaps other improvements will soon follow.

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Transportation Services for the Disabled: A Complex Public Policy Issue 035948

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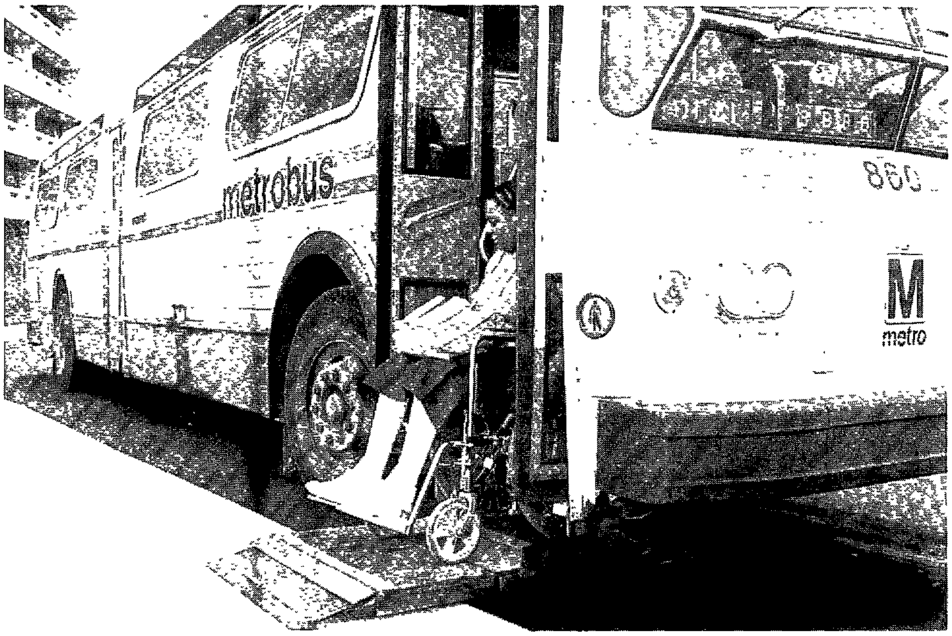
Federal transit assistance to local communities has grown dramatically from $50.7 million in 1965 to over $4 billion in 1984. Not surprisingly, the number of anticipated benefits generally associated with improved mass transit services and facilities has seen corresponding growth. In 1984, GAO began reviewing the broad trends and general effects of federal transit assistance. In our report, "20 Years of Federal Mass Transit Assistance: How Has Mass Transit Changed?" (GAO/RCED-85-61, Sept. 18, 1985), we noted that mass transit subsidies are part of a federal strategy intended to help urban areas address myriad problems, such as traffic congestion, air pollution, and energy consumption. An additional purpose of transit subsidies is to improve the mobility of people who have difficulty using traditional, fixed-route transit services. However, devising transportation services and facilities to meet the mobility needs of a relatively small yet highly diverse disabled community has proved to be a complex and controversial problem. In attempting to find a solution, policymakers, planners, transit operators, and the disabled are realizing that agreeing on a transportation solution that is cost-effective for all disabled people in all situations is as difficult a balancing act as deciding how to cut the federal deficit.

This article focuses on efforts to provide transportation services for the disabled in urban areas nationwide. It provides a brief look at the evolving purposes of federal mass transit assistance and addresses the current conflict over service approaches for the disabled, the need for more information on the disabled population, three different approaches to providing service, the high cost and limited use of these services, and implications for the future of transit services for the disabled.

Evolution of Federal Transit Assistance

When the Congress started providing federal transit assistance to local communities in the early 1960's, it was primarily concerned about the transit industry's deteriorating financial condition, decreasing service, and declining ridership. Moreover, the Congress viewed this assistance as an important mechanism for helping maintain the general welfare and vitality of urban areas nationwide. As the level of federal financial assistance increased and the Congress started providing operating as well as capital assistance, mass transit began to be seen as a vehicle for addressing a growing array of social, economic, and environmental problems besetting our urban areas.

For its first 10 years or so, government assistance for urban mass transportation had been partially justified as a way to stabilize transit fares to help ensure a minimal level of transportation for all citizens. During this time, most people accepted as a fact of life that the disabled could not participate fully in society because various barriers restricted their access to buildings and other public facilities. Consequently, no distinct effort was made to address the special mobility problems of the disabled until the early 1970's, when heightened social consciousness spawned greater awareness of the needs of the disabled. Although it is difficult to measure precisely the cost to society of limiting the mobility of the disabled, decisionmakers came to realize that ignoring the needs of this constituency also affected society in general. For example, by not assisting such people to travel to employment locations, society was losing both human and financial resources.



A passenger takes advantage of the District of Columbia's fixed-route bus service

As a result, federal policymakers attempted to aid the disabled through subsidies designed to reduce fares and provide more extensive service. They also enacted the following legislation requiring localities receiving federal transit assistance to make special efforts to plan and design mass transportation services that could be used by the disabled: section 504 of the Rehabilitation Act of 1973; section 16 of the Urban Mass Transportation Act of 1964, as amended; and section 105 of the Federal-Aid Highway Amendments of 1974.

Conflict Over Service Approaches

The current situation is complex and controversial. Opinions vary concerning the most appropriate transportation services to improve the mobility of the approximately 7.5 million disabled people 5 years of age or older residing in urban areas. Although local governments, the transit industry, transportation planners, and the disabled population disagree on remedies, none of these groups has been able to reach internal consensus on what needs to be done to improve the mobility of the disabled.

Some organizations, such as the National Association of Paralyzed War Veterans and the American Disabled for Accessible Public Transportation (ADAPT), a Denver-based group representing the concerns of wheelchair users, favor implementing fully accessible, fixed-route transit service. ADAPT has called for every bus in the United States to be equipped with a chairlift, arguing that the level of service provided by most specialized services is not comparable to that provided by fixed-route transit. This lack of comparability, they say, has prevented the disabled from "mainstreaming" into the activities of the general population.

Other disabled people and their advocates, such as the National Association of the Physically Handicapped and the Disabled American Veterans Association, would prefer that localities develop multifaceted transportation systems that combine accessible, fixed-route transit service with specialized door-to-door service. Given the diverse mobility impairments of their memberships and the relatively small number of people assisted by accessible, fixed-route transit service, these groups believe that supplementing fixed-route service with specialized transportation will enhance the mobility of a greater number of the disabled population.

The controversy among local transportation planners, the transit industry, and the disabled has been fueled, to some extent, by relatively frequent changes in federal regulations concerning adequate public transportation services for the disabled. In response to section 504 of the Rehabilitation Act of 1973, the U.S. Department of Transportation (DOT) issued regulations in 1979 mandating that new mass transit vehicles and facilities be fully accessible to the disabled, including people using wheelchairs. The regulations also required that transit operators modify their existing vehicles and capital plant according to a specified timetable. Much debate surrounded these regulations: The American Public Transit Association brought suit on behalf of the transit industry, arguing that the regulations were too costly to implement and would only offer assistance to a limited number of people. And the Congressional Budget Office, the National Research Council, and other organizations argued that specialized, demand-responsive services would be more cost-effective than fixed-route service and meet the travel requirements of greater numbers of the disabled.

Finally, the regulations were rescinded in 1981 after a federal court ruled that the Rehabilitation Act of 1973 did not support DOT's policy of requiring expensive bus and rail modifications. Subsequently, DOT issued interim regulations that relaxed the "fully accessible" requirements and allowed local communities greater discretion in determining the most appropriate way to serve the disabled.

Information on Diverse Characteristics Needed

Sound decisionmaking by local transportation planners striving to develop appropriate services for the disabled requires adequate information on the diverse physical, social, and economic characteristics of the disabled in their communities. Planners also need to know how frequently, when, where, and for what purposes the disabled travel. To illustrate, a 1983 study published by the Transportation Research Board (TRB) noted that the disabled travel less than half as much as the general population. TRB attributed this situation to the high percentage of disabled who are unemployed, due either to their retirement or their inability to find employment.

Basic Service Approaches

Given the heterogeneity of the disabled population, local communities across the nation have worked closely with transit operators to devise and implement service strategies that meet the varied requirements of people with mobility restrictions. The basic service approaches have taken three forms. As previously mentioned, one approach has been to modify fixed-route transit vehicles and facilities by both installing wheelchair lifts in older buses and purchasing new buses already equipped with lifts. In cities with rapid rail transit, this approach has included installing elevators at major transit stations.

A second approach has been to develop specialized transportation services. These services, which include door-to-door trans-

Rider in wheelchair is assisted onto a lift by the driver of a Chicago Transit Authority special services bus serving the needs of Chicago's disabled riders. Several U.S. cities provide this kind of special service in an attempt to make public mass transit systems more accessible to disabled riders.

Table 1

Cost-effectiveness of Accessible, Fixed-route Bus Systems in 1980

System	Accessible buses in fleet	Daily lift boardings	Cost per lift boarding
Detroit Department of Transportation	163	0.7	$1,293
Milwaukee County Transit System	250	2.1	661
Bi-State Development Agency (St. Louis)	157	1.0	372
Southern California Rapid Transit District (Los Angeles)	430	5.0	222
Connecticut Transit (Hartford-New Haven-Stamford)	280	12.3	164
Washington (D.C.) Metropolitan Area Transit Authority	150	5.7	146
Champaign-Urbana (Illinois) Mass Transit District	40	1.7	82
Municipality of Metropolitan Seattle Transit Department	163	54.0	16

Source: TRB

portation using specially equipped vans or buses, are generally provided on a request basis. A principal advantage of specialized services over conventional, fixed-route, accessible transit service is that such services help mitigate or, in some instances, totally eliminate difficulties in getting to and from transit vehicles and facilities. These services are offered either by the local transit system or by various social service agencies and private, nonprofit organizations operating in cooperation or under contract with a transit agency. Consequently, no two specialized transportation systems are exactly alike; they vary in service type, trip reservation requirements, service area, program eligibility criteria, fare policies, and administering agency.

A third basic service approach gaining supporters among transportation planners and service providers is the concept of providing transportation subsidies directly to people requiring mobility assistance. Some transportation analysts believe that these "user-side" subsidy programs have several distinct advantages over "provider-side" subsidy programs. Kirby and Miller of the Urban Institute, for example, favor the user-side concept because, unlike the traditional method of subsidizing transit operators, it allows subsidies to be targeted to specific user groups. With the user-side approach, transit operators might be less inclined to expend funds for unused or unneeded capacity or service, thus forging a closer link between service costs and service demand. Therefore, if demand for special services declined, so would the cost of subsidizing the people using specialized services.

Communities that have devised user-side subsidy programs have generally allowed eligible people to purchase trips from providers (e.g., taxicab companies) at prices below those charged the general population. Typically, users purchase vouchers from the subsidizing agency at a discounted price and present them to the transportation carriers. The carriers then present the vouchers to the subsidizing agency, which redeems them at full-fare value.

Many communities have implemented at least one of these service approaches. The American Public Transit Association reports that in 1985 over 30 percent of the nation's transit systems provided fixed-route, accessible bus service; another 40 percent had implemented some type of specialized service; and another 30 percent utilized a combination of these approaches. Some examples of community approaches follow.

Fixed-Route Transit Services at Work

Cognizant of their obligation to all their citizens, many cities—including Washington, D.C., and Los Angeles—are actively seeking ways to better meet the needs of the disabled. Regional transportation planners, local government officials, the local transit authority, and the citizens' advisory committee in Washington, D.C., had been embroiled for several years in a debate over which method most effectively balances the transportation needs of the disabled, legal requirements, and service costs. Currently, Washington has a hybrid, accessible, fixed-route program that integrates some lift buses into regularly scheduled service along various routes throughout the metropolitan region. To more effectively meet individual needs, the authority has implemented a 24-hour, call-in-advance service that adds lift-equipped buses to specific routes on a request basis. This service is complemented by the authority's new, fully accessible rail system, which includes elevators in all its 60 rail stations.

While the transit authority prefers to limit the number of lift-equipped buses in its active fleet, some citizen groups have lobbied hard for the eventual development of an all-lift-equipped bus system. Although all parties recognize the importance of enhancing the mobility of the disabled, data from the transit authority reveal that its accessible, fixed-route bus system has not been especially cost-effective: Service costs have been high—due to the costs of purchasing and maintaining vehicles—while, at the same time, the service has been underutilized because of unreliable equipment and limited demand for accessible bus service.

As a compromise solution, the transit authority recently agreed to equip half its bus fleet with wheelchair lifts by the mid-1990's. Although a study prepared for the authority suggested it consider providing specialized door-to-door service for the disabled, the proposal was rejected because specialized transportation services are already provided by more than 100

Table 2

Cost-effectiveness of Existing Specialized Transportation Services

System	Markets served	Period covered by cost data	Cost per passenger trip
Metropolitan Atlanta Rapid Transit Authority L-Bus	Handicapped	FY 1977	$16.95
Orange County, Calif., Dial-A-Lift	Handicapped, except blind, deaf, and mentally retarded	1979	14.42
Columbus, Ohio, Project Mainstream	Handicapped	1979	13.69
Boston, Mass., The RIDE	Handicapped	1979	11.62
Houston, Tex., METROLIFT	Handicapped, elderly, low income	1979	11.57
Austin, Tex., Special Transit Service	Handicapped	FY 1978	10.84
New York City Lower East Side EASYRIDE	Handicapped, elderly	N.A.	10.83
El Paso, Tex., HandySCAT	Handicapped	N.A.	8.87
Naugatuck Valley, Conn., Transit District	Handicapped, elderly	N.A.	8.40 dial-a-ride 3.05 subscription
Rochester, N.Y., PERT Lift Line	Handicapped, elderly	N.A.	7.64
Portland, Ore., LIFT	Handicapped, elderly	N.A.	7.31
El Paso, Tex., Project Bravo	Handicapped	N.A.	6.01
Proviso Township, Ill.	Handicapped, elderly	N.A.	5.88
Will County, Ill.	Handicapped, elderly	N.A.	5.50
Brockton, Mass., DIAL-A-BAT	Handicapped, elderly	FY 1978	5.49 dial-a-ride 1.02 subscription 1.92 combined
Rochester, N.Y., Paratransit Enterprises, Inc.	Handicapped, elderly	N.A.	5.08
Tucson, Ariz., Handi-Car	Handicapped	1979	4.96
Fairfield, Conn., Department on Aging	Elderly, Title XX recipients, wheelchair users	FY 1978	4.80[a]

Table 2 cont'd on page 26

other local agencies, including county departments of social services and agencies on aging.

Los Angeles, on the other hand, operates a bus-only, accessible, fixed-route transit system. Recent state legislation requires that localities receiving transportation subsidies install wheelchair lifts on all their buses. Until this goal can be met, the transit authority has agreed to a local citizens' advisory committee suggestion that the current fleet of lift-equipped buses be distributed evenly among all routes. At this time about 67 percent of the routes are served by lift-equipped buses.

How Specialized Services Work

Of the transit systems GAO reviewed, only those in Boston and Chicago currently provide some type of specialized service. Boston's transit authority has taken the combined approach of operating accessible, fixed-route, lift-equipped buses along 10 designated routes while deploying 40 specialized demand-responsive vans and buses throughout greater Boston and several surrounding jurisdictions. In Chicago, the transit authority provides, through a contractor, 42 specially equipped buses on a door-to-door, request basis.

Variations in specialized transportation services have also been identified in research sponsored by the Urban Mass Tranportation Administration (UMTA). In Portland, Oregon, the public transit agency operates a door-to-door, demand-responsive system in the central city that uses special lift-equipped buses that must be reserved 48 hours in advance. In addition, several local taxicab companies have contracted with the transit agency to provide supplemental demand-responsive service. People registered for the program can use the specialized services as many times as they want, in contrast to other programs that limit the number of trips participants take on either a weekly or monthly basis.

Alternatively, Pittsburgh's transit authority has contracted with a private management firm on a cost-plus-fixed-fee basis to coordinate services throughout the Pittsburgh region. Established initially through a UMTA demonstration grant, the program gives the management firm full control of such areas as system design, contracting, and marketing. Nonprofit agencies and taxicab companies generally accept requests for service one day in advance.

Table 2 (Cont.)
Cost-effectiveness of Existing Specialized Transportation Services

System	Markets served	Period covered by cost data	Cost per passenger trip
Bridgeport, Conn., Coordinated System	Elderly, Title XX recipients, wheelchair users	FY 1978	4.75
Pomona Valley, Calif., Senior Citizens and Handicapped Transportation Authority Get About Transportation	Handicapped, elderly	June 1979	4.47
Tucson, Ariz., Special Needs Transportation Service	Handicapped	1979	4.43
Broward County, Fla., Social Service Transportation	Handicapped, elderly, low income	1979	4.37

[a]The user-side subsidy program in this city supplements the publicly operated specialized transportation service.

Source: TRB

Same-day requests are accommodated if service providers have room on prescheduled trips.

Examples of User-side Subsidy Programs

Milwaukee, Wisconsin; Kansas City, Missouri; and Montgomery, Alabama; have taxi user-side subsidy programs. Milwaukee County's program operates throughout a 237-square-mile area. Considered a relatively successful program by transportation analysts Kirby and Miller, it provides door-to-door service to people who use wheelchairs, walkers, or crutches and to the blind. In 1983, program participants paid a base fare of $1.50 per trip; the remaining cost, up to a maximum of $9.50 for wheelchair users and $6.50 for others, was subsidized by the county.

High Costs and Limited Use

Although accessible, fixed-route transit service, specialized service programs, and individual transportation subsidy programs have varying cost structures, the transportation research GAO reviewed generally reported that certain applications of these service approaches have been somewhat more cost-beneficial than others.

Fixed-Route Service

Typically, transit systems providing accessible, fixed-route service require considerable capital expenditures: Wheelchair lifts, according to DOT, can add an estimated $8,000 to $17,000 to the cost of a new transit bus. Accessible, fixed-rate transit systems also incur additional maintenance, personnel, training, insurance, and fuel costs. By some estimates, these costs can add more than $2,000 to annual operating costs per lift-equipped bus.

Furthermore, case study data indicate that few disabled people have taken advantage of this type of service. In fact, recent studies published by TRB indicate that, in most localities, a small group of people has been responsible for most of the recorded trips. Table 1 shows that the cost-effectiveness of some accessible systems operating in 1980, measured by cost per trip, ranged from $16 per trip in Seattle to approximately $1,300 in Detroit.

Specialized Service

Costs for specialized transportation services also vary considerably (see Table 2). Some estimates indicate that accessible vehicles can cost transit operators anywhere from $14,000 to $30,000, and operating costs, often presented in terms of the cost to provide a vehicle-hour of service, also vary widely. According to the transportation research we reviewed, costs vary based upon the kinds of vehicles used, prevailing wage rates, service hours, and various institutional arrangements.

While isolating the utilization rates of the disabled from those of other eligible users is often difficult, recent transportation studies indicate that only a small percentage of eligible people in most areas register to participate in specialized transportation programs. In studying this phenomenon in various cities, UMTA concluded that service utilization differences among cities such as Akron, Ohio; Eugene, Oregon; and Austin, Texas; were apparently related to the percentage of handicapped people in each area, their specific disabilities, and their access to automobiles.

User-side Subsidy Programs

Two cost factors are associated with user-side subsidy programs: administrative costs and user-subsidy payments (the more expensive of the two). Factors such as service area, trip length, taxi fares, and average subsidy per trip combine to influence service costs (see Table 3). As is the case with other service options, use of user-side subsidy programs has been limited, although not much information is available on why this is so. However, researchers, such as Kenneth Heathington, suggest that limited use may reflect the fact that the incomes of many people eligible for special transit assistance are so low that they find it difficult to make the cash payment required for such services.

Implications for the Future

Developing public mass transit services that efficiently and effectively meet the diverse needs of all citizens presents a considerable challenge to transportation policymakers, planners, transit operators, and the disabled community. As deficits continue to grow and federal and local transit subsidies decline, local governments and their public transit operators will be forced to make hard decisions in

Table 3
Cost-effectiveness of Existing User-side Subsidy Programs

Site of program	Period covered by cost data	Cost per passenger trip
Milwaukee, Wis.	1980	$7.26
Portland, Ore.	Sept.-Nov. 1978	5.64[a,b]
Austin, Tex.	FY 1978	4.50[a,b]
Seattle, Wash.	1980	4.46
Santa Clara County, Calif.	1976	3.24[b]
Montgomery, Ala.	1979	3.05
Akron, Ohio	Oct. 1978	2.96[a,b]
Kansas City, Mo.	May 1977-April 1978	2.92
Los Angeles Harbor Area	1978/79	2.83
Sunnyvale, Calif.	FY 1977	2.30[b]
Palo Alto, Calif.	FY 1977	2.25[b]
Fremont, Calif.	1976	2.11
San Leandro, Calif.	1977	1.85
Kinston, N.C.	1979	1.47
Lawrence, Mass.	1979	1.24
Danville, Ill.	1976	1.22
Lafayette, Calif.	FY 1976	0.63[b]

[a]The user-side subsidy program in this city supplements the publicly operated specialized transportation service.
[b]Subsidy cost per trip; does not include the administrative cost.

Source: TRB

order to balance the varied, and, in some instances, conflicting policy goals of all parties. Decisionmakers will have to reevaluate their transit-pricing policies to raise additional revenues and determine which services are most necessary to their constituents. Although local governments will assuredly continue to provide some type of transportation for the disabled, they will need to implement only the most cost-beneficial arrangements. Finally, the debate over transit system accessibility requirements will continue, particularly since DOT has yet to issue revised accessibility regulations. In spite of these considerations and the high costs associated with the various transportation options, comments from local communities and transit operators suggest that, in the future, more emphasis will be placed on providing specialized services, and the number of localities experimenting with user-side subsidy programs will grow.

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A GAO Forum: The Need for Sound Financial Management in the Federal Government

Introduction

The need for sound financial management is one of the most critical issues facing the federal government today. Our country may be sowing the seeds of a financial crisis similar to the one recently faced by New York City. Our government has just completed its third consecutive year with budget deficits at about $200 billion. Action must be taken promptly to deal with this situation, which poses severe threats to the stability and long-term health of our economy.

Dealing with these deficits is one of the most important issues our government faces. The 1985 enactment of the Balanced Budget and Emergency Deficit Control Act (P.L. 99-177), the so-called Gramm-Rudman-Hollings plan, is a strong start. The plan would force a balanced budget within 5 years. But reducing the deficit requires more than passing a deficit reduction act. Very difficult decisions must be made not only in selecting programs and activities for reduced funding but also in generating sufficient revenues to pay for the services our citizenry demands.

If the Congress is to make well-informed decisions, it must have reliable financial data. Better financial information will not make the deficit go away, nor will it make budget decisions easy. But it will help the Congress better understand the issues it faces and the implications of the decisions it makes. Likewise, agency and program managers must have reliable financial information to effectively and efficiently manage their operations.

In response to these concerns about the financial affairs of the federal government, GAO has undertaken a number of projects to improve financial management. The following three articles, reprinted from the spring and summer 1985 issues of the *Government Accountants Journal* (with the permission of the Association of Government Accountants), discuss some recent GAO initiatives.

In the first article, Comptroller General Charles A. Bowsher looks at today's government financial management picture and discusses some of the steps GAO is taking to improve financial management in the federal government. In a follow-up article, I explore some of the ramifications involved in auditing federal government summary-level financial statements. The last article, by Bruce Michelson, group director of the accounting and standards group, Accounting and Financial Management Division, and Barbara Pauley, a former member of his staff, analyzes the requirements of the revised GAO accounting principles and standards (title 2 of the GAO *Policy and Procedures Manual for Guidance of Federal Agencies*).

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Summary-level Financial Statements: A Necessary Step Toward Needed Improvements in Financial Management

Charles A. Bowsher

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The need for sound financial management is one of the most critical issues facing the federal government today. With an annual budget approaching $1 trillion and a current annual deficit approaching $200 billion, we must develop the modern financial systems necessary to accurately account for and manage the resources consumed in carrying out government programs. The time has come to make those desperately needed improvements.

Currently, federal finances are managed through an elaborate structure of decision processes and information systems. Many of these processes and systems are obsolete and face ever-increasing difficulties in coping with the demands placed on them. The most visible evidence of these difficulties is the enormous cost in time, energy, and public confidence involved in the annual search for consensus on the budget. Problems elsewhere in the structure are less visible but equally real:

- The processes by which we decide how much to spend, and for what purposes, are cumbersome, repetitive, and time-consuming.
- Controls over how federal money is spent are detailed and burdensome, but they are routinely found to be ineffective in preventing abuses.
- Budgeting, accounting, and management information systems often yield data that are unreliable, inconsistent, and all too often irrelevant.

The government must make a major effort to rebuild its financial management structure. Old computer systems must be replaced with more modern technology, a long, expensive process. At the same time, however, this updating creates the opportunity to build a structure that will serve the needs of government and the public in the last decade of the 20th century and beyond.

As part of its continuing role and responsibilities, GAO recently has completed two major efforts aimed at improving federal financial management. A two-volume report, "Managing the Cost of Government: Building an Effective Financial Management Structure," was published in February 1985 (AFMD-85-35 and 85-35-A). This report identifies the key issues that must be dealt with and proposes a conceptual framework for comprehensive reform of financial management in government. In addition, GAO is charged by law to establish accounting principles, standards, and related requirements executive agencies are to follow. In fall 1984, after almost 2 years of intensive effort by a special task force, GAO issued revised accounting principles and standards (title 2 of the GAO *Policies and Procedures Manual for Guidance of Federal Agencies*).

One of the most significant requirements of the new principles and standards is for summary-level financial statements to be prepared annually by all departments and independent agencies as well as for the entire federal government. Such statements are to reflect the totality of operations and position and are to be prepared from disciplined financial management systems that have effective internal controls and reliable financial data.

This requirement is a critical step toward comprehensive upgrading of federal financial management systems, since such statements

- represent the systems' end-product,
- are a culmination of a process involving consistent application and enforcement of specifically defined standards, and

• are the basic year-end accounting of upper management that discloses their stewardship of resources and their performance for the period.

We need only look to past experiences in the private and state and local government sectors to see how such summary-level statements are vitally important as a tool on which to base financial decisions.

Private and State and Local Government Sectors

The need for informative and reliable summary-level financial statements in the private sector became evident after the stock market crash in 1929. Prior to that, companies listed on the stock exchanges provided investors financial statements that supported stock values that management desired. The information was of unknown reliability. Accounting standards as we know them today did not exist, and there was no requirement or general practice of having statements audited by independent auditors. The crash led to

• congressional hearings,
• the establishment of the Securities and Exchange Commission,
• the requirement for annual financial statement audits, and
• the creation of a mechanism within the accounting profession to promulgate principles and standards.

Events analogous to the market crash for state and local governments occurred in the mid-1970's in New York City and New York State. In 1975, the city experienced a severe crisis when the financial markets refused to purchase its securities. Financial analysts had been expressing concern about the city's over-extended financial position and rapidly growing short-term debt, but no one in the city government seemed to take the warnings very seriously. When the city could not refinance its debt, it faced the prospect of bankruptcy, and when New York State then tried to help, the threat of bankruptcy spread to it as well.

At the heart of the New York problems were the policies that led to excessive spending. But underlying those policies was the fact that the governments of New York State and New York City did not have good pictures of their own financial conditions. For example, after the crisis began, it took the state a year to find out how much debt it had, and, in the city, not even the professional accountants could make sense of the numbers. Not even city officials could reconcile the cash accounts, for which the budget office and the comptroller's office carried different numbers.

Prior to the mid-1970's, no effective mechanism existed to promulgate meaningful accounting principles and standards for state and local governments, and the financial statements of these governments were usually not audited. Since then, the accounting profession and the wider financial community have paid a great deal of attention to the accounting standards for state and local governments. About a year ago the Government Accounting Standards Board (GASB) was created, and it is proving to be an effective standard-setting mechanism. Subsequently, thousands of state and local governments have begun publishing annual reports containing audited financial statements.

Although summary-level financial statements of the entire reporting entity, prepared in accordance with professional standards and compiled from a disciplined accounting system containing reliable data, might not have averted the stock market crash or the New York crisis, they surely would have provided an obvious alarm of impending danger. Consider what summary-level financial statements conforming to the current GASB standards and audited by independent CPAs for New York City would have looked like in 1974 and 1975. The city's statement of financial position would have shown unusually large liabilities compared to statements of states and other local governments, and the due dates of the debts would have been highlighted. If such statements were prepared from an accounting system containing reliable data and were accompanied by an auditor's report, city officials would have had information on total liabilities, due dates of the liabilities, total receivables, and due dates of the receivables, as well as other information on expected cash receipts. The warning of impending crisis would have been clear and, more importantly, in sufficient time to avert it.

Overall Summary Financial Statements

The stock market crash and events in New York City and State tell us that, all too often, awareness of the need for better financial management only comes after a financial crisis. Our challenge now is to change that pattern. Consider some facts about the federal government today:

• Borrowings from the public (the federal debt) are nearly $1.2 trillion, 34 percent of GNP and rising.
• Interest on borrowings from the public is $109 billion, about 11 percent of total expenses.
• Federal borrowing from the public is 56 percent of total borrowing within the United States.
• Cash disbursements per day are over $2 billion.
• Spending during fiscal year 1983 on programs fixed by law, which can only change as a result of changes in laws, was nearly $465 billion.
• Total exposure of commitments and guarantee and insurance programs is over $3 trillion.

This situation does not imply an imminent fiscal crisis, but it does imply the need to get our fiscal house in order. Policymakers, members of the Congress, and the public should have these facts and related information to help assess how their actions affect the overall financial picture of the government. Information such as this would, and should, be available from summary-level financial statements.

GAO's accounting principles and standards require consolidated financial statements of the overall federal government, including specifically a statement of financial position, a statement of operations, a statement of changes in financial position, and a statement of reconciliation to the budget. These statements are to be prepared using appropriate accrual-accounting techniques similar in many respects to the statements issued by state and local governments. It is important to emphasize that these statements are neither intended to replace existing budgetary execution reporting nor to become the primary documents for budget requests. Rather, these statements are intended to provide information supplemental to and not generally found in budgetary reports, but which is necessary to more fully assess performance and financial position.

To more fully assess financial position, information on total liabilities not available in budget reports (such as data on contingencies and pension liabilities) is needed. This information also can be used to better plan for cash management not only in the coming year but a number of years in advance. Examples of other information that should be contained in the summary-level statements include
• short- and long-term receivables to help plan future cash inflows;

- property, plant, and equipment fixed assets to help plan for capital replacement; and
- cost data to help assess performance.

It is important to note that these statements will present financial information on the totality of the federal government. They do so in a simple, meaningful, and familiar form in a few condensed schedules and notes not available in the current budget reports or official U.S. Treasury reports. This added dimension enhances the statements' understandability.

Many organizations, such as publicly owned corporations, are required to present to the public comprehensive financial statements audited by independent CPAs. Just as shareholders expect management to report the financial position of their companies, taxpayers and others should receive summary information regarding the financial position of the government. Such a practice will disclose the cumulative financial effects of decisions on the nation's resources and provide early warning signals to policymakers.

Summary-level Statements for Departments and Agencies

The four summary financial statements are also required at the department and agency level, as clarified in the revised accounting principles and standards. These statements are necessary for the same reasons as the consolidated statements of the overall federal government, namely, the usefulness of the information contained in them and the discipline required to compile them.

Department and agency statements will show a complete picture of the financial effects of the programs administered by the reporting entity and provide readers with a better appreciation of the overall operations of the entity. Such statements at the department and agency level will contain information on fixed assets (helpful in capital budgeting and replacement programs), receivables and liabilities (helpful in short- and long-term cash management and budgeting), cost data (helpful in assessing performance), and the cumulative results of operations (to help assess performance on a trend basis over a number of years).

Among the advantages gained at the department and agency level from the summary-level statements are the following:

- A top-down view of the entire entity and the relative significance of major fund types and programs will assist management and policymakers in focusing their attention.

- The process of compiling statements (the systems' end-product) through consistent application and enforcement of specifically defined standards and the inherent rigor of applying these standards provides a discipline that is reinforced when the process is repeated annually.
- The statements facilitate not only an independent audit to verify the fairness of the information they contain but also an audit of the financial transactions reflected in the statements and the financial management system supporting them.

Financial Statements at Lower Levels

Even though summary-level financial statements of the overall federal government, departments, and agencies are necessary, the need for financial information on programs, activities, and projects also is critical to effective management. However, today's financial statements starting with these lower levels do not provide a clear, concise, complete, or timely picture of the activities they are intended to portray. As a result, they are often useless as a basis for decisionmaking. Some reasons for these problems are as follows:

- Financial management systems are decentralized throughout the government. Many are technically obsolete. This contributes significantly to a lack of uniformity.
- The focus of attention is almost exclusively on obligation and outlay data, which is necessary for budget control and short-term cash planning, but, without additional information, severely limits a decision process.
- There is a lack of reliable and comparable data on the results of transactions.

An integrated budgeting and accounting system that focuses on the resources used or consumed to achieve program results would help to ensure that the costs of activities are recorded consistently throughout government. Such a system, using consistent reporting categories, could produce managing reporting that compares the estimated and actual costs of operations, organizations, programs, and projects.

The quality of financial management systems directly affects not only the quality of reports on programs, activities, and projects but also the related summary-level financial statements of departments and agencies created from the roll-up of the lower level reports and the overall federal government statements rolled up from these summary-level statements. Among the benefits of adopting such a system to produce financial statements on programs, activities, and projects are

- the ability to compare planned with actual use of resources,
- reliable project status reporting,
- the ability to establish user fees to cover the cost of government services when that is deemed appropriate,
- the ability to compare activities of similar operations across the government,
- more accurate budget estimates based on actual past program and project costs,
- the ability to measure the input of resources and the output of performance,
- greater assurance that financial transactions are not artificially moved from one fiscal year to another, and
- increased accountability for the management of public funds.

The Future for Summary-level Financial Statements

The improvements we envision in financial management systems and reporting outlined in the preceding sections will require a large effort and sustained commitments of resources throughout government. Over the past few years GAO has devoted significant efforts to making improvements, and we will continue these efforts in hopes of helping to build a strong financial management structure that will serve the needs of users in the years ahead. GAO's role in financial management can be viewed at three levels:

- financial management systems and detailed reporting at the program, activity, and project level;
- department and agency summary-level financial statements; and
- consolidated federal government financial statements.

At the systems and detailed reporting levels we will continue to provide the leadership and encouragement for building more modern, effective, and integrated budget

See Statements, p. 56

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Financial Audit: The Key to Reliable Information and Improved Management

Frederick D. Wolf 035950

Ed. note: Comprehensive financial auditing of federal government financial statements is a relatively new idea. In this article, Mr. Wolf explores some of the ramifications of such audits—the benefits, problems, and pitfalls—and asks the questions, "Can these audits really be done?" and "Should they be done?"

Since 1934, annual comprehensive, accrual-basis financial statements of all publicly held corporations audited by private sector independent public accountants have been required as a matter of public policy by the federal government. This policy has served us well as one of the keystones of our private sector by forcing and enforcing internal controls and accurate reporting by management of the results of their actions and stewardship of shareholders' interest.

Since the mid-1970's, a move has been afoot in the state and local governmental sector to emulate the success of the private sector in financial management by turning to comprehensive, accrual-basis financial statements audited by independent public accountants or state auditors as a means to obtain financial control and improve stewardship reporting by state and local officials to both their constituents and lenders. In 1984, the Congress passed the Single Audit Act mandating, as a matter of public policy, financial statement audits of virtually all major state and local governments. Prior to this congressional action, the Office of Management and Budget (OMB) had promulgated through Attachment P a requirement for annual financial audits for state and local governments.

Has the Congress been twice wrong in mandating annual financial audits as a means to improve financial controls and public reporting in the private and state and local sectors? Was OMB wrong? Were GAO, the Joint Financial Management Improvement Program, the Securities and Exchange Commission, and the Government Finance Officers Association—all of whom advocated and endorsed the concept of financial audits in the public and private sectors as a means of improving financial controls and public reporting—wrong? Was the Congress wrong when it mandated accrual-based financial statements and periodic financial audits by GAO or outside public accountants of all federal government corporations, the Postal Service, or New York City? No! These were wise decisions made with a sensible view toward long-term improvements in financial controls and stewardship reporting for those entities.

Now then, did these policies work? The answer is a resounding yes! That is not to say that those entities audited have been without problems. But they do, as a result of these policies, have better controls than before they began preparing comprehensive financial statements audited by independent accountants. I would submit that any student of history will conclude that those policies have been a significant success.

Are we in the federal sector then going to follow this lead or are we going to say "Oh, no, it's OK for us to require that for everyone else, but not for me, thank you." Are we going to continue to fall further and further behind the private and state and local government sectors in accountability systems, financial controls, and stewardship reporting?

Again we believe the answer to this question is no. We believe the time has come for the federal government to begin a program of comprehensive financial statement preparation and financial audits.

In fact, this program has already begun. The Congress passed the Federal Managers' Financial Integrity Act (FIA) in 1982, requiring an annual assessment of internal controls and accounting systems to determine if they conform to the Comptroller General's principles and standards. In 1984, GAO issued the revised title 2, which requires agency preparation of comprehensive accrual-based financial statements, an obvious prerequisite to a financial audit.

The 1985 FIA reports by agencies will need to address conformance with those new GAO standards and how the agencies intend to cure any noncompliance that exists, including the lack of financial statements.

GAO, for its part, is beginning to focus some of its audit energies on financial audits of federal agencies. We currently have four such audits under way. We will do more in this area. We will also begin to work with some members of the Inspector Generals' community to explore this issue of financial audit in their agencies.

What do we expect to get out of this move toward financial audit? In broad terms, we would expect no less than what has been achieved in the private sector over the years and that which we are beginning to achieve in state and local government. As the twin policies of financial reporting and financial audit mature, we expect

- better public reporting of the results of the government's stewardship,
- data integrity,
- systems discipline,
- improved controls, and
- better information to enable management to better manage and control the cost of those operations.

Summary-level Financial Reporting

In the previous article, entitled "Summary-level Financial Statements: A Necessary Step Toward Needed Improvements in Financial Management," Comptroller General Bowsher maintains that major problems exist today in the financial management practices in the federal government and that comprehensive reforms are necessary to build a financial management structure capable of effectively serving the needs of government and the public now and in the future. In response to the need for reform, his article covered GAO's overall financial management initiatives and focused on one of the major phases of financial

Table 1
Auditing Federal Government Financial Statements

GAO Financial Management Initiatives	Initiative	Subject and/or Purpose
Report:	"Managing the Cost of Government: Building an Effective Financial Management Structure" (Vols. I and II), issued February 1985	This report approaches financial management from a government-wide perspective. Volume I identifies major problems and key issues to be addressed to make federal financial management an effective tool in the last decade of the 20th century and beyond. Volume II proposes a conceptual framework for comprehensive reform.
Standards:	Revised accounting principles, standards, and related requirements (title 2, *GAO Policies and Procedures Manual for Guidance of Federal Agencies*), issued November 1984	These revised standards are an update of the 1978 title 2, which contains several requirements that are necessary first steps to achieving overall improvements in financial management. The more significant updates include internal control standards and required agency year-end financial statements prepared from accounting systems containing sufficient discipline.
Reviews:	Monitoring implementation of the Federal Managers' Financial Integrity Act	FIA requires agencies to annually assess the quality of their internal controls and accounting systems and to report to the President and the Congress. For the past two years, GAO has performed comprehensive, government-wide reviews on implementing FIA and has or will report to the Congress.
Study:	Joint project of GAO and the Auditor General of Canada to determine the needs for financial information by users of such information. Ongoing effort nearing completion.	The subject of this study is summary-level financial information on the overall federal government. The users of such information include legislatures; citizens, media, and special groups; federal government managers and planners; macroeconomists; the corporate sector; and bankers and lenders. This study will provide the views of such users in two of the world's leading countries thereby establishing greater authority for what constitutes needs of federal financial information. It will also provide a strong base for further study.

Table 1 cont'd on page 34

Table 1 (Cont.)
Auditing Federal Government Financial Statements

	GAO Financial Management Initiatives — Initiative	Subject and/or Purpose
Audits:	Pilot audits of financial statements at selected agencies. Ongoing effort.	While GAO's long-term goal is to audit the summary-level financial statements of the federal government, audits of department/agency statements must come first, and the experience gained on these pilot audits will be a valuable planning tool. The benefits of improved internal control and data reliability will be most significant at this level.
Other efforts include:		Assisting the Department of the Treasury in revising its manuals to incorporate the revisions to the new title 2.
		Performing special studies involving major accounting issues (such as Social Security) to help determine how best to report such issues in financial statements.
		Developing appendix III to title 2, covering financial management system standards (e.g., account structures and integration of budget and accounting).
		Providing technical assistance and support (including training) on a continuing basis throughout the federal government.

Note: The financial management initiatives covered here generally focus on accounting systems and financial reporting and do not include other GAO initiatives in related financial management areas, such as budget and program audit.

management-accounting systems and financial reporting. (These initiatives are listed in Table 1.)

Accounting systems and financial reporting are cornerstones to, and provide the structure for, overall financial management. Perhaps the more important part of this, however, is the financial report containing financial statements that portray the totality of operations and position of the entity being reported on. This is necessary because such statements serve two critical objectives: (1) They help ensure the quality of the accounting systems that generate them, since they represent the systems' end-product, and (2) they provide reliable information useful to users of such statements. That is, they facilitate system discipline and convey useful information.

Information Usefulness

In order for information contained in financial statements to be useful, it must be both reliable and needed as a source of input in assessing performance and making decisions about the reporting entity.

The requirement for agency financial statements is set forth in the revised accounting principles and standards recently issued by GAO in title 2 of its *Policy and Procedures Manual for Guidance of Federal Agencies.* The four statements required are the statements of (1) financial position, (2) operation, (3) changes in financial position, and (4) reconciliation to budget. Also contained in these revised standards is the specific financial information to be contained in these four statements.

These standards were developed under the primary premise of providing useful information that is cost-beneficial to produce. First, the four summary-level financial statements show an overall "top-down" picture of the reporting entity that generally is not available elsewhere They set forth the total resources, claims to those resources, and the changes in them over the period as well as financing sources and expenses incurred in carrying out programs. In addition, they provide the relative significance of programs and fund activity within the department/agency.

Obviously, the reporting entity's management will not conduct day-to-day operations or make important decisions based on the information contained in its summary-level statements. Rather, it will manage from lower level statements on programs, activities, or projects that contain information that is "rolled up" in summary to form the overall entity-wide statements. However, the requirement of entity-wide statements is directed at users external to the reporting entity: the Congress, the oversight agencies, and the public.

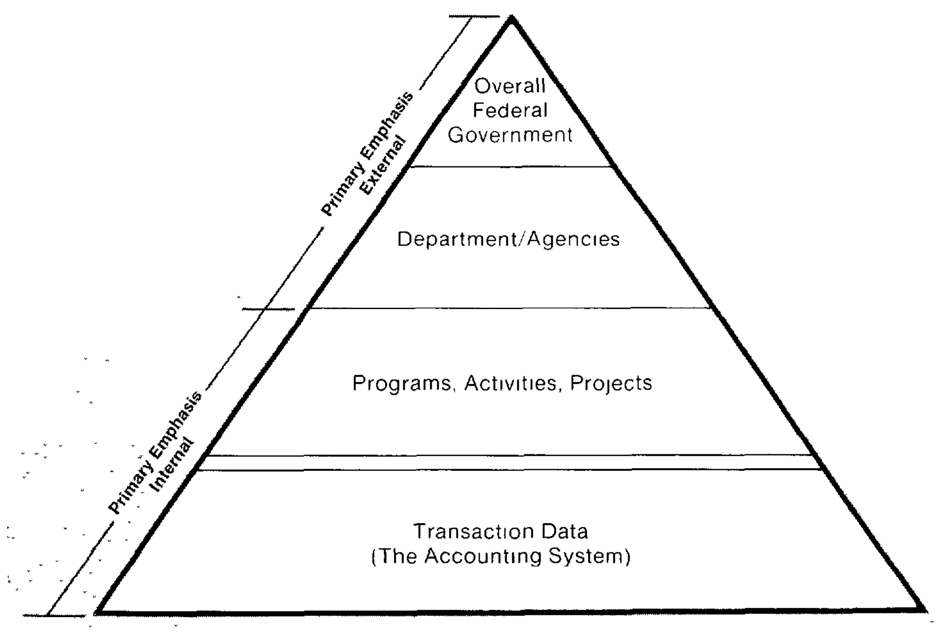
Discipline

The preparation of four basic summary-level financial statements is a major step toward instilling discipline within a department/agency's accounting systems. To help convey the concept of discipline we can focus on the financial reporting pyramid in Figure 1.

The pyramid concept itself implies an upward flow. Basic transaction data are at the pyramid's base. Above the base are detail reports covering programs, activities, and projects, and the "roll-up" process is continued through department/agency financial statements to statements on the overall federal government.

The discipline that is pictured in the pyramid is the degree of control gained through the "roll-up" process of compiling financial statements. Specifically, the control is:

Figure 1 The Federal Government Financial Reporting Pyramid



• The process whereby financial statements are prepared from accounting systems containing the underlying transaction data bases and not from ad hoc information. This would easily facilitate reconciliations between entity-wide statements' line items and the statements covering programs, activities, and projects.
• The fact that the statements reflect the department/agency's totality of operations and position, not just selected program activities. Because such statements reflect all operations, top management of the department/agency will be involved to ensure that the statements are fairly presented.
• The focus on the system's end-product (financial statements) and the "order" achieved by consistent application and enforcement of specifically defined rules (title 2 accounting standards) and the inherent rigor of applying the rules. To apply these rules on the end-product, they obviously must be applied down to the transaction data base also.
• The fact that this entire process is repeated periodically (at least annually) when such financial statements are prepared.

Audits Help Achieve Information Usefulness and Discipline

Financial audits ensure that the information provided in financial statements is useful and reliable by determining whether they faithfully summarize the transactions that have occurred within the entity's reporting period. Financial audits also ensure that underlying data and records used for a multitude of management and external purposes contain accurate and consistent data. Disciplined accounting systems will provide the most reliable financial statement information. Financial statement audits will evaluate and enforce that discipline by testing the entity's consistency in applying accounting, reporting, internal control, and other applicable standards.

What the Future Holds

GAO's ultimate goal is to audit the federal government's financial statements, which have been produced as prototype statements since 1975. The recently issued title 2 requires financial statements from departments and independent agencies. GAO plans to audit these departments and independent agencies.

The benefits of such audited financial statements will be to provide federal policymakers with relevent information needed to manage the federal government and to inform the public with reliable information on the financial position of the government. This should help restore the public confidence in government accounting, something that is sorely lacking at the current time.

Several major issues must be resolved before the issuance of audited federal government financial statements, such as how to disclose Social Security costs in the statements; whether to present supplemental information using nonaccrual bases of accounting, such as the cash, obligation, or expenditure bases; and how to tie into the budget.

Several major auditing issues must also be resolved before the issuance of audited statements. First, some might contend that the complexities of the government's financial system preclude a comprehensive report on internal control as required by generally accepted government accounting standards (GAGAS). With the implementation of FIA, however, issuing a report on internal control does not appear as a major problem. Second, due to the numerous laws with which agencies must comply, a comprehensive report on compliance with applicable laws, required by GAGAS, might be difficult to produce.

Additionally, we are beginning to address many matters that must be dealt with, including

• sheer volume of transactions,
• hundreds of separate decentralized accounting systems that are not integrated between departments or agencies,
• ad hoc information systems that are not centrally controlled at department or agency headquarters,
• lack of identity or inter- and intra-departmental or agency transactions, and
• ineffective integration of budget and accounting.

Conclusion

It will not be easy to perform financial audits in the federal government, but, with economic conditions as they are, we can no longer afford not to have reliable information. As the state and local government and private sector experiences have shown us, audited financial statements are needed to ensure data accuracy and systems integrity and to better display the effect of economic conditions on our government's financial position. Our work at the department and agency level has already begun. The benefits of such an audit program will be substantial.

The 1984 Title 2: How Different Is It From Its Predecessors and Current Practice?

Bruce Michelson
Barbara Pauley

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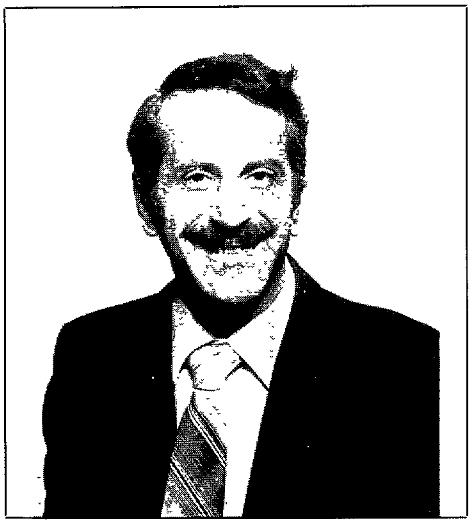

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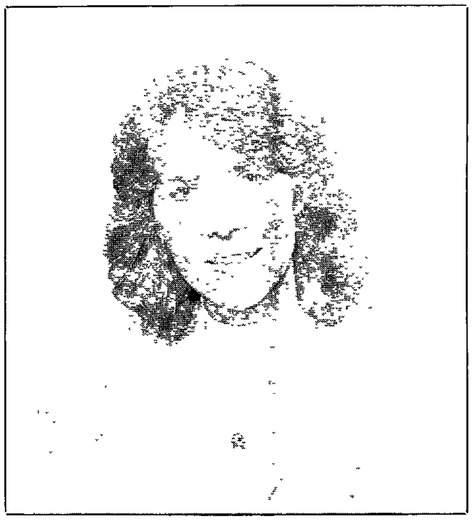

Ms. Pauley, who worked 11 years for GAO, was the project director for the agency's recent effort to revise title 2 from October 1982 to August 1984. A certified public accountant, she is now a self-employed consultant and tax accountant. Ms. Pauley received a bachelor's degree from West Virginia University. She has served 3 years on the Association of Government Accountants' (AGA's) national research board and is a member of the American Institute of Certified Public Accountants, the Maryland Association of Certified Public Accountants, and the Washington, D.C., Chapter of AGA.

The revised title 2, accounting principles and standards, of *GAO Policies and Procedures Manual for Guidance of Federal Agencies*, was issued in fall 1984 after considerable due process and almost 2 years of effort by GAO. A special task force of GAO staff and consultants from the accounting profession took nearly 1 year to develop a draft released for comment in the fall of 1983. GAO staff then consulted extensively with federal agencies, especially the two primary oversight agencies responsible for implementing title 2, the Department of the Treasury and the Office of Management and Budget (OMB).

Since the issuance of the revised title 2, there has been concern that the new requirements call for widespread changes in accounting systems and reporting practices that are too costly to implement. Although the revised title 2 looks very different from the 1978 version, the new requirements are not significantly different from the requirements of the 1978 title 2 and current practice.

The purpose of this article, therefore, is to analyze the requirements of the revised title 2 by comparing them with the 1978 version and current practices.

The revised title 2 reflects four types of changes:

- format,
- focus on requirement for year-end reporting,
- new subjects covered, and
- changes to 1978 requirements.

Format

Perhaps the major difference between the 1984 title 2 and its predecessor is in the organization and layout of the document. The 1978 title 2 presented all types of standards in one main text, whereas the 1984 revision presents different types of standards in three appendices.

The 1978 version prescribed the standards in several sections (such as assets, liabilities, and revenues). Internal control, accounting systems, and accounting principles and reporting requirements were covered together within each section. At times it was difficult to distinguish among the three. The three appendices now do that. Besides facilitating a better understanding of the standards, this distinction of internal control standards and accounting principles and standards is necessary for complying with the FIA of 1982. The act requires heads of agencies to report annually on whether their agencies' systems of internal control conform to the internal control standards promulgated by the Comptroller General and whether their agencies' accounting systems conform to the accounting principles and standards prescribed by the Comptroller General.

A brief description of each appendix follows.

- Appendix I, "Accounting and Financial Reporting Standards," prescribes the accounting principles, the four basic external financial statements, and related disclosures.
- Appendix II, "Internal Control Standards," specifies the minimal level of quality acceptable for internal control systems. These internal control standards were issued in June 1983 in a separate publication and have been incorporated here in their entirety.
- "Financial Management System Standards" are currently being developed and will be issued as Appendix III, which will include requirements for account struc-

tures; integration of budget, accounting, auditing, and reporting; and data maintenance.

These other format changes and additions are found in Appendix I: Subjects are listed alphabetically, and some illustrative journal entries are provided, as is a topical index.

Although these format changes give the revised title 2 a completely different look, they do not reflect substantive changes to the document. Rather, they were made primarily to provide an understanding of the accounting standards and principles, encourage their wider use, and help agencies meet their responsibilities under FIA.

These form changes were provided in response to user requests and to permit easier use of the document. The illustrative journal entries were included to provide examples of how certain reporting standards could be implemented. Originally, they were included in the GAO draft for explanation without the intention of including them in the final document. However, many who commented on the draft noted the entries were very helpful in explaining the standards and urged GAO to retain them. The alphabetical listing and topical index were included to enable quick access to specific subjects in title 2 because one of the major problems cited by users of the 1978 title 2 was the difficulty of finding specific subjects. Table 1 compares the format of the 1978 and 1984 versions of title 2.

Table 1
Comparison of 1978 Title 2 to the 1984 Title 2

Subject	1978 Title 2	1984 Title 2
Placement of standards	All standards are discussed together in the body of title 2.	Standards are segregated by (1) accounting and financial reporting, (2) internal controls, and (3) financial management system standards, and each type is discussed in 1 of 3 appendices.
Listing of subjects	Subjects are listed by financial statement section format (such as assets, liabilities, etc.).	
Journal entries		Illustrative journal entries are provided.
Topical index		Topical index is provided.

Year-end Reporting

The revised title 2 requirement for financial statements at period-end by departments and agencies is probably the second biggest factor contributing to the belief that the revised title 2 requires broad, sweeping, comprehensive changes. Actually, however, the 1978 version of title 2 required year-end reporting of many federal activities and recommended it for all agencies. In addition, year-end reporting similar to that required in the revision is currently, and has been for some time, required by the Treasury and OMB. However, even though there have been similar year-end reporting requirements placed on agencies before the revised title 2, there is now one requirement that goes beyond what is currently specified: requiring consolidated reports of departments and independent agencies rather than only of lower-level "entities." This very important change will result in needed discipline being instilled in federal agency systems. Therefore, although the requirement for year-end reporting in the revised title 2 may seem new, it really is a much-needed extension and formalization of existing requirements.

The Four Financial Statements

The revised title 2 requires four basic financial statements to be prepared in accordance with title 2 accounting principles and standards and submitted to the Department of the Treasury at the end of each fiscal year by each department or independent agency. They are the

- Statement of Financial Position (balance sheet),
- Statement of Operations,
- Statement of Changes in Financial Position, and
- Statement of Reconciliation to Budget Reports.

The 1978 title 2 requirements for financial statements were not as explicit as the requirement in the 1984 revision but did, nevertheless, definitely imply such financial reporting by agencies. The 1978 version stated that federal agency accounting systems would be designed to enable prompt preparation of all needed financial reports. Included were reports similar to those required in the revised title 2, with the exception of the Statement of Reconciliation to Budget Reports. The 1978 title 2 stated the following:

- All agencies should prepare statements of assets and liabilities relating to their programs or activities.
- Agencies carrying on business-type activities should prepare statements of operations disclosing revenues and costs. Other agencies should prepare statements showing revenues classified by a meaningful basis that is useful for management purposes.
- Statements of financial position and results of operations should be accompanied by statements of sources and application of funds.

In addition to prior title 2 requirements, the Treasury and OMB have required year-end financial reporting for some time now. The Treasury requires all agencies to provide a balance sheet type of statement called the SF 220. It is very similar in many respects to the Statement of Financial Position required by the revised title 2. The Treasury further requires all business-type agencies to provide an SF 221, which is an Operating Statement. This statement, too, is similar to the Operating Statement required by the revised title 2. In addition, OMB requires agencies to file OMB form 133, Report on Budget Execution, on a monthly and year-end basis to report the status of their financing sources and obligations by appropriation or fund. This report provides similar information to the reporting of financing sources and expenses in title 2's Statement of Operations. Table 2 presents a comparison of 1978 title 2 reporting requirements to the revised ones.

Refined Definition of Entity

The reporting entity, as defined in the revised title 2, is "the organization, compo-

Table 2

Year-end Reporting
Comparison of 1978 Title 2, 1984 Title 2, and Other Current Reporting Requirements

Subject	1978 Title 2	Other Current Reporting Requirements	1984 Title 2
Statement of financial position	Statement of assets and liabilities is required of all agencies. No detailed suggested disclosures are given.	Treasury SF 220 requires all agencies to report balance-sheet information requiring disclosure of (1) value of assets (restricted and unrestricted), (2) liabilities, (3) government equity (not segregated by section), (4) supplemental disclosure in footnotes, where necessary, (5) receivables listed in total, (6) leased assets under capital lease are not segregated, and (7) contingent liabilities are not included as a liability on the face of the balance sheet but rather are listed separately.	Statement of Financial Position is required of all departments and independent agencies, including disclosures of (1) value of assets (restricted and unrestricted), (2) liabilities, (3) government equity is segregated by invested capital, cumulative results of operations, unexpended appropriations, donations, and fund balances (for trust funds only), (4) supplemental disclosures in footnotes, where necessary, (5) receivables are segregated by type of entity owing them, (6) leased assets under capital lease are listed separately from other assets under property, plant, and equipment, and (7) contingent liabilities are included in liabilities.
Operating statement	Required all business-like activities to prepare such a statement disclosing revenues and costs. Other agencies are required to prepare statements showing revenues.	Treasury SF 221 requires operating statements of business-like activities. It includes expenses, losses, transfers out, financing sources, and gains. It refers to all "incomes" except transfers as "revenues." The bottom line is called "retained earnings." OMB Form 133 requires similar information on financing sources matched to related spending.	A Statement of Operations is required of all departments and independent agencies. It includes expenses, losses, transfers out, financing sources, and gains that provide the Results of Operations. It nets operating expenses against financing sources. Financing sources are segregated by type: (1) expended appropriations, (2) operating revenues from business-like activities, (3) revenues earned under the government's sovereign power, (4) transfers in from other federal agencies, (5) operating donations, (6) current year transfers of equity for depreciation, and (7) others. The bottom line, the Results of Operations, is added to the Cumulative Results of Operations, which shows the changes in equity due to current year operations.

Table 2 cont'd on page 39

Table 2

Year-end Reporting
Comparison of 1978 Title 2, 1984 Title 2, and Other Current Reporting Requirements (Continued)

Subject	1978 Title 2	Other Current Reporting Requirements	1984 Title 2
Statement of changes in financial position	A statement of sources and application of funds should accompany statements of assets and liabilities and operating statements. This statement is to be presented on the gross basis.	None	Statement of Changes in Financial Position is required of all departments and independent agencies. It is to be prepared on the cash basis representing all significant sources and uses of sources.
Statement of reconciliation to budget reports	Not required	None	Such a statement is required of all departments and independent agencies. Information in the statements is reconciled to the TFS Form 2108 (Year-end Closing Statement).

nent of the organization, or activity for which financial statements are prepared." The revised title 2 further defines the reporting entity at two levels:

- In its broadest sense, the accounting and reporting entity is the entire federal government.
- At a lower level, the reporting entity is a department (or its constitutent agencies) or an independent agency.

The revised title 2 requires the four financial statements to be prepared at both levels, but allows a department to use its agency-level statements plus a statement on department-level organizations if it does not prepare consolidated statements.

In contrast to the revised title 2 definition of "entity" in terms of "reporting" requirements, the 1978 title 2 defined entity for the purposes of "designing, establishing, and maintaining accounts." It stated that ". . .each agency must clearly define. . .the entities for which separate groups of accounts are to be established." It went on to state, "An accounting entity may be an entire agency, a subdivision thereof. . ., or one or more legally established funds."

The revised title 2 builds on that 1978 definition to provide the "roll-up process" necessary to produce consolidated department-level and consolidated federal government financial statements. This is to say that the bottom lines of financial statements prepared at the agency level should be directly reconcilable to the total of the bottom lines of the activities and bureaus (the lower level groups of accounts, the 1978 definition of "entity") within that agency. Further, the bottom lines in the departmental financial reports should reconcile to the totals of the department's constituent agencies' statements. This "roll-up" of financial information per the entity concept prescribed by the revised title 2 helps instill discipline in the account balances produced by the financial management system(s) within a reporting entity.

This same "roll-up" of financial information is one that the Treasury has been reflecting for the past 9 years in its preparation of the federal government consolidated financial statements. The information provided by the SF 220s is one of the sources for these statements. However, because departments and independent agencies have not prepared a full set of financial statements as is now required, the Treasury has to supplement the reported information through various other data-gathering techniques. For this reason, the consolidated federal government financial statements are currently only prototype statements. Hopefully, the Treasury's consolidated federal government financial statements will no longer be only prototypes but rather official statements.

Discipline

The requirement for agencies to prepare the four basic financial statements is a major step toward attaining that degree of control achieved through the process of compiling agency-wide financial statements. This level of discipline is aimed at the system's end-products (financial statements) and is the "order" achieved by the process through upper managment's involvement, consistent application and enforcement of specifically defined rules, and the inherent rigor of applying them. The discipline is reinforced since the process is repeated periodically (at least annually).

This discipline is provided for in the revised title 2 through two main processes:

- The "roll-up" process discussed earlier in which the bottom lines of financial statements prepared at the agency level should be directly reconcilable to the bottom lines of the activities and bureaus within that agency.
- The process in which financial statements are prepared from an accounting and budgeting system that is an integral part of the entity's total financial management system.

As previously mentioned, the 1978 title 2 required agency accounting systems to be capable of generating needed financial statements. Had the requirement been fully implemented, this discipline in federal agency accounting systems would have been in place.

The 1978 accounting principles and standards were not fully implemented, however, because there was no mechanism for enforcement such as mandatory periodic financial statements on total entity operations. The production of four basic financial statements by federal departments and independent agencies, however, will go a long way toward helping achieve this discipline in the accounting systems of agencies.

New Subjects Covered

The third type of change that makes the revised title 2 different from the 1978 title 2 is the addition of several new subjects. Many of these subjects, although not in the 1978 title 2, have been extensively covered by the accounting profession since 1978 or have been the source of numerous questions received by GAO since that time.

Actuarially Computed Liabilities

The most significant new subject covered by the revised title 2 is actuarially computed liabilities.

They apply to federal benefit programs that determine their liabilities by making actuarial calculations (e.g., using demographic, economic, probability, and other factors to determine the value of payments expected to be made in the future). In general, the standard requires responsible agencies to recognize in their accounting records, and report in the financial statements, a liability for

- unpaid claims for benefits as of the date of the financial statements,
- estimated claims that have been incurred but not yet reported, and
- future program benefits when payment is reasonably certain and the amount can be estimated.

The determination of actuarially computed liabilities is important to determine today's value of payments expected to be made in the future. Such determinations have been an area of concern at the federal, state, and local levels of government and in the private sector in recent years. The federal government is already obligated to make these payments based on events or recipient eligibility occurring during the current period. It is important to recognize these liabilities so that the true financial position and results of operations of the programs can be ascertained. The federal government must disclose the financial position and results of operations because, in administering these benefit programs, it acts in a stewardship or trust capacity for others and is therefore responsible for maintaining accountability for these programs.

Although the 1978 title 2 did not require actuarially computed liabilities for these programs to be recognized and reported in financial statements, other federal government requirements have called for such recognition and reporting. For example, for years the Treasury has been required to report to the Congress all of the federal government's liabilities and financial commitments, including actuarially based liabilities for pension programs and Social Security, in the "Statement of Liabilities and Other Financial Commitments" report. The Treasury prepares this report from amounts agencies provide on the SF 220 and other Treasury forms. Some of the nonpension, actuarially computed liabilities included in the report are the Health Care Financing Administration's Federal Hospital Insurance Trust Fund and Federal Supplementary Medical Insurance Trust Fund, Social Security Administration's Federal Old-Age and Survivors Insurance, and the Federal Disability Fund. Therefore, even though the revised title 2 imposes new accounting and reporting for these federal benefit programs, as compared to the 1978 title 2, they are not new accounting and reporting requirements to the federal community.

Other New Standards

Several other new standards have been added. The impact of these, however, is not widespread. Many were added to help implement other standards; others to cover questions raised by users in recent years. These new standards include

- comparative financial statements;
- consolidated financial statements;
- prior-period adjustments to financial statements;
- reporting appropriations in the statements of financial position, operations, and changes in financial position; and
- unusual and infrequent items.

Other new standards that are rather narrow in scope and, for the most part, cover accounting practices already followed but not in the 1978 title 2 include

- debt agreement modifications,
- entitlements,
- fair value,
- investments,
- loan guarantees and commitments, and
- regulatory accounting.

As the titles show, many of these standards apply only to specific activities at a few agencies. For example, very few agencies hold investments in trust funds. The Treasury, however, does have some investments and already is accounting for them in accordance with this standard. Table 3 provides a complete list of the new standards and a summary of the new requirements.

Changes to 1978 Requirements

The final type of change made in the revised title 2 is in specific accounting requirements. These changes were made to reflect current practice in the accounting profession at the state and local government levels and in the private sector. Additional changes were made to reflect current thinking and research by GAO in specific areas where various agencies had questions.

Current Practices

Some of the changes to accounting requirements that reflect current practices in the accounting profession were made because they seem appropriate at the federal level as well. Included are the changes in the capitalization criteria found in the Property Plant and Equipment Standard and in the requirements for when to capitalize a lease in the Lease Standard.

In the former, the dollar limit at which capitalization must be imposed was raised from $1,000 to $5,000 with a life expectancy of 2 or more years. The changes reflect the current trend toward raising capitalization criteria. This change should not require much additional work and should actually reduce paperwork because many items will no longer be listed in the accounts, even though they may be listed in property records.

The change in the capitalization of lease criteria contained in the revised title 2 reflects the requirements in similar standards governing private sector accounting as well as state and local government accounting. No longer are leases capitalized only when a decision to purchase has been made as required in the 1978 title 2. Rather, if the lease agreement meets certain criteria that make it appear to be a lease-purchase agreement, the leased asset is to be capitalized at the beginning of the lease.

Current Research and GAO Thinking

As previously mentioned, other changes reflect current GAO thinking. Two examples of changes based on recent research into specific areas are contained in the stand-

Table 3

Subjects Included in the 1984 Title 2 That Were Not Covered or Minimally Covered in the 1978 Title 2

Subject	1984 Title 2 Treatment
Appropriations for property, plant, and equipment	Provides guidance on where to report such appropriations when they are initially received and when they are expended as well as guidance on the effect of depreciation and retirement of the asset on the appropriations.
Comparative financial statements	Requires presentation of financial information from the preceding year in annual financial statements.
Consolidated financial statements	Requires that such statements for the federal government be prepared annually, lists the required statements, and lists specific standards to be followed in the consolidation process.
Debt agreement modification	Specifies the accounting to be followed by creditor federal agencies when they have agreed to modify debt agreements because of debtors' financial difficulties.
Entitlements	Specifies the accounting treatment to be followed by certain entitlement programs under which unpaid claims to benefits are due recipients at year end.
Fair value	Defines fair value and provides guidance on the determination of fair value.
Investments	Provides accounting and reporting requirements for investments in marketable securities and the related income.
Liabilities based on actuarial computations	Requires responsible federal agencies to recognize and report in financial statements a liability for future payment for benefits as of the date of the financial statement and gives specific guidance on computing these liabilities under various types of programs.
Loan guarantees and commitments	Requires accrual and/or disclosure of loan guarantees and commitments.
Pensions	Requires reporting of and disclosure about agency contributions to pension plans in agency financial statements, and, for agencies administering plans, requires reporting on such plans in the administering agencies' financial statements.
Prior-period adjustments of financial statements	Prescribes guidance for when events are recognized as adjustments to prior-period financial statements.
Regulatory accounting	Prescribes accounting treatments of rate-regulated activities that differ from those for a nonregulated activity.
Reporting appropriations in the statements of financial position, operations, and changes in financial position	Specifies reporting treatment of available appropriations, appropriations withdrawn, restorations, unexpended appropriations, and expended appropriations.
Research and development	Specifies the accounting to be followed for research and development expenses.
Unusual and infrequent items	Defines unusual and infrequent items and prescribes the reporting treatment of such items.

ards, "Transfer of Assets and Liabilities Between Federal Agencies" and "Equity."

In the first, the change requires transfers to be made at transferor's book value (except for transfers made by business-like activities) instead of at approximate book value as was required by the 1978 title 2. This change was made as a result of GAO's work on the "entity" issue and the belief that the entire federal government is a related party. Although the concept is very different from that followed in the 1978 title 2, the accounting changes to accomplish change should require minimal effort.

The changes in the "equity" standard involve redefining the parts of "equity" on a federal agency's statement of financial position. The newly defined parts are the result of extensive GAO work with numerous federal agencies and government corporations in developing financial statements for such entities.

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Changes in format, financial reporting, coverage of subjects, and specific requirements make the title 2 revisions seem more extensive than they are. In reality, the revised title 2 is substantially different from the 1978 title 2 only in that the former promulgates "new" practices that are, to a large degree, already followed or practiced in the federal government or in the accounting profession today.

Therefore, the revised title 2 reflects many current practices and should not be difficult or costly to implement. The cost, if there is a large cost, will come in upgrading federal government financial management systems to an acceptable level. This is a cost that must be incurred to get government operations under control regardless of whether there is a new title 2 to implement. It is also a cost that the federal government can no longer afford not to incur.

Table 4
Differences in Requirements Between 1978 Title 2 and 1984 Title 2

Subject	1978 Title 2	1984 Title 2
Capitalization of interest on property, plant, and equipment	Requires imputed interest cost to be capitalized where substantial.	Requires only interest paid to be capitalized.
Contingencies	Covers only loss contingencies.	Covers gain as well as loss contingencies and requires claims against the U.S. government to be accounted for as a contingent claim by the agency where the claim originated.
Depreciation and amortization	Requires depreciation only when need arises for periodic determination of the cost of all resources consumed in performing services. Amortization is not mentioned.	Requires depreciation of all business-like activities and encourages depreciation of all other government activities. Prescribes accounting for amortization.
Equity of the U.S. government	Defines "investment of the U.S. government" as consisting of congressional appropriations, property and services obtained from other agencies without reimbursement, donations received, accumulated net income from operations, funds returned to U.S. Treasury, property transferred to other federal agencies without reimbursements, and accumulated net loss from operations.	Defines "equity of the U.S. government" as consisting of invested capital, cumulative results of operations, unexpended appropriations, donations and other items, and fund balance (for trust funds only).
Financial reporting	Requires that systems be capable of producing financial statements where useful.	Requires financial statements of all departments and independent agencies.
Foreign currency	Discusses Treasury's requirements.	Provides accounting and reporting requirements as well as Treasury requirements.
Imputed interest	Discusses the concept in generalities in the interest section.	Defines the term and specifically discusses it in a separate standard.

Table 4 cont'd on page 43

Table 4
Differences in Requirements Between 1978 Title 2 and 1984 Title 2 (Continued)

Subject	1978 Title 2	1984 Title 2
Leases	Requires recording assets under lease-purchase agreement at the time the option to purchase is exercised (unless the agreement is actually an installment sale).	Requires recording assets leased under a lease-purchase agreement that meets certain criteria at the inception of the lease.
Long-term contracts	Prescribes accounting for liabilities for goods and services purchased under a long-term contract.	Prescribes accounting and financial reporting for goods and services sold under a long-term contract as well as those purchased under such a contract.
Property, plant, and equipment	Requires assets to be capitalized if they cost $1,000 or more and have a useful life of 1 year or longer.	Requires assets to be capitalized if they cost $5,000 or more and have a useful life of 2 years or longer.
Transfer of assets and liabilities between federal agencies	Requires nonreimbursable transfers to be recorded at approximate useful value, which can differ from the original cost or transferor's book value.	Requires nonreimbursable transfers to be recorded at the transferor's book value (for nonbusiness-like activities) based on the principle that the entire federal government is a related party.

Assessing GAO's Internal Controls: A Review of the Procurement of Goods and Services

Raymond G. Bickert

Mr. Bickert is an evaluator in the General Government Division's civilian procurement and property management group. He has been with GAO since 1972, except for the period October 1978 to December 1979 when he served as an auditor with the Office of the Inspector General at the Veterans Administration. Mr. Bickert received a B.S. degree in business administration from Bloomsburg State College in Pennsylvania. He has received several Certificates of Merit and Appreciation from GAO in recognition of his work.

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Ed. note: What is an internal control review? How does an internal control review relate to or differ from a management or program results audit? Where does the procurement process start and end? And what does GAO procure and how does it go about it? These are some of the questions Mr. Bickert dealt with when the senior associate director of the civil procurement and property management issue area assigned him to be evaluator-in-charge on an internal control review of GAO's procurement practices used to purchase and contract for goods and services.

In this article, Mr. Bickert reviews the role of the Federal Managers' Financial Integrity Act (FIA) and, through a review of GAO's procurement functions, describes how the agency has implemented the act's provisions. The article relates to the theme of the preceding Forum, showing how an individual agency approached improved financial management.

Mr. Bickert describes the approach used, audit program developed, and lessons learned from performing an internal control review within one agency, GAO. In the first half of the article, he provides an overview of the FIA and of GAO's general approach to its own FIA reviews. He describes the actual procurement audit in the second half of the article.

GAO Assesses GAO

Many audits have been performed concerning GAO's review of how federal executive agencies have implemented FIA, which provides for a government-wide approach to identifying and solving internal control and accounting system problems that hamper program effectiveness and accountability. (Two *Review* articles also dealt with this subject; see *The GAO Review*, spring and summer, 1985.)

The overall internal control objectives of the act seek to ensure that

- obligations and costs are in compliance with applicable law;
- programs/systems, funds, property, and other assets are safeguarded against waste, loss, unauthorized use, or misappropriation; and
- revenues and expenditures applicable to agency operations are properly recorded and accounted for to permit the preparation of accounts and reliable financial and statistical reports and to maintain accountability over the assets.

Although GAO, as part of the legislative branck, is not bound by FIA provisions, the Assistant Comptroller General for Operations established a task force in June 1983 to assess GAO's internal controls in accordance with the act. The task force developed a six-step approach for evaluating, improving, and reporting on GAO's internal controls.

- **Step 1: Segmenting GAO Into Assessable Units.** Before starting its work, the task force divided GAO's functional operations into 15 transaction cycles, that is, groupings of similar events designed to accomplish specific purposes, such as procurement, personnel, and training. The task force did this because it recognized the necessity of examining cycles across organizational units (i.e., headquarters offices and divisions, regional offices, and overseas offices).

By using organizational charts, GAO Orders, policy and program guidance, and budgeting information, the task force was able to develop an inventory of organizational units for each transaction cycle. Except for top-level policymaking, the inventory covered all signficant program, administrative, and financial functions.

• **Step 2: Conducting General Risk Analysis.** A general risk analysis is a review of the susceptibility of a program or function to waste, loss, abuse, or misappropriation. The goal of the general risk analysis was to identify areas of risk so that controls over those risks could be evaluated in the next phase of the assessment.

For each transaction cycle, the managers who had lead responsibility for the cycle made the general risk analysis. The analyses called for the reviewers to (1) become familiar with all important and pertinent aspects of the functions or programs being assessed; (2) identify and evaluate all major operations, including management and financial controls, and identify potential problem areas; and (3) evaluate the general control environment, including management attitude, policies and procedures, organizational structure, authority and responsibility for personnel delegation and communication, and budgeting and reporting practices.

• **Step 3: Conducting Vulnerability Assessments.** Vulnerability assessments are evaluations of internal control systems undertaken at the organizational unit level to (1) identify factors that create an inherent risk, (2) consider the operating environment, and (3) make a preliminary evaluation concerning whether safeguards exist to prevent waste, loss, unauthorized use, or misappropriation.

All GAO organizational units, except two that had recently undergone reorganization, made vulnerability assessments during fiscal year 1983. These self-assessments identified needed corrective actions and areas requiring further evaluation. The vulnerability assessments served as the primary basis for determining the need for in-depth internal control reviews.

• **Step 4: Conducting Internal Control Reviews.** Using the vulnerability assessments, the task force ranked each transaction cycle according to vulnerability and considered internal audit reports and other internal studies on the need for in-depth internal control reviews. The Assistant Comptroller General for Operations established internal control review teams to make reviews that were deemed necessary.

• **Step 5: Taking Corrective Action.** The vulnerability assessments and the internal control reviews identified weaknesses within GAO and developed recommendations suggesting how the weaknesses could be eliminated. To ensure that the control objectives achieved were cost-effective, the costs and the expected benefits of changes were considered when evaluating alternatives. The assessments and reviews were not an end in themselves; a formal follow-up system was established that not only tracks actions on recommendations and target dates but also monitors the timeliness of improvements. GAO's Office of Internal Evaluation also reviews corrective actions taken.

• **Step 6: Reporting to the Assistant Comptroller General for Operations.** The head of each GAO organizational unit prepared a report to the Assistant Comptroller General, dated September 30, 1983, that covered the adequacy of the organization's system of internal accounting and administrative controls for applicable transaction cycles. These reports provided the documentation that management and other GAO personnel recognize the importance of internal controls and that the necessary evaluation and approval processes are taking place. The reports, together with the designated internal control reviews, formed the basis for a consolidated report to the Comptroller General.

Auditing GAO's Procurement Cycle

Armed with a general knowledge of GAO's approach to FIA, the General Government Division (GGD) group began its assigned task of reviewing procurement internal control. First we learned about GAO's procurement cycle, then we adapted the appropriate steps (described above) to serve our needs.

Procurement in GAO is centralized within the General Services and the Controller (GS&C) organization's Office of Acquisition Management (OAM), which is responsible for purchasing and contracting services. OAM consists of a purchasing branch (which generally handles procurements of less than $25,000 that use small-purchase procedures) and a contracting branch (which generally handles procurements of more than $25,000).

In addition to OAM, several other offices within GS&C also complete a sizable number of procurement actions: the Office of Library Services (OLS), which purchases books and publications; the Office of Facilities and Property Management (OFPM), which procures renovation, building maintenance services, and guard services; and the travel and transportation branch of the Office of Financial Management (OFM), which purchases airline tickets. Goods and services are obtained primarily by purchase orders, contracts, job orders issued to the General Services Administration (GSA), interagency agreements, and imprest funds. In addition, the Office of Publishing and Product Communications (OPPC), a recently established independent unit, purchases printing services. In fiscal year 1984, GAO spent about $40 million, or over 10 percent of its annual budget, to procure goods and services.

Audit Guidelines

In developing audit guidelines, the GGD team had to familiarize itself with such internal-control-review-related terms as "event cycles," "general control environment," "inherent risks," "internal control objectives," and "internal control techniques." Although general information was available from certified public accounting firms, consulting firms, and other agencies, few examples existed for specifically performing a *procurement* internal control review. Therefore, we structured the review to reflect the way GAO actually procures goods and services. For the purpose of this review, the audit team analyzed fiscal year 1984 procurement documents. Employment and procurement by contract or purchase order of individual experts and consultants were not included as part of this review.

Eight Steps Used

We adapted eight audit steps generally consistent with the Office of Management and Budget's (OMB's) *Guidelines for the Evaluation and Improvement of and Reporting on Internal Control Systems in the Federal Government.*

• **Step 1: Identifying Event Cycles.** Event cycles consist of a series of steps or actions that can be isolated within the procurement function. We identified five cycles, including planning, solicitation, award, administration, and payment of a procurement, and then conducted an internal control review that assessed the effectiveness of controls in each cycle at the "event" level. This level of assessment helped the audit team locate specific control weaknesses.

• **Step 2: Documenting Event Cycles.** This step consisted of a description of activities included in each event cycle. We documented the individuals (by position name or classification) who perform procurement activities; the process and procedures they use; the forms, files, or other records that are used or maintained to record activities; and the regulations, orders, policy statements, and memoranda establishing procurement requirements or procedures. For example, we reviewed a flow chart to compare written descriptions of the procurement process to the actual steps for processing procurement requests.

• **Step 3: Analyzing the General Control Environment.** An overall picture of the management that is applied to the procurement function is called the "general control environment." We recorded aspects of management attitude, organizational structure, personnel, delegation and communication of authority and responsibility, policies and procedures, budgeting and reporting practices, and organizational checks and balances.

• **Step 4: Identifying Internal Control Objectives.** A statement of what has to be done to avoid or minimize risk is called an "internal control objective." The control objective should be observable (enabling the reviewer to know *what* objective will be achieved) and measurable (enabling the reviewer to know *how* the objective will be achieved). For example, we noted one control objective for the solicitation event cycle: that GAO should ensure that the maximum practicable competition is obtained.

• **Step 5: Identifying Internal Control Techniques.** Processes or documents that enable the control objective to be achieved in an efficient and effective manner are called "internal control techniques." Two examples of control techniques we documented are that (1) written or telephone quotations were received during procurement solicitation and (2) authorization was required when amendments to the solicitation changed the potential cost of a contract.

• **Step 6: Evaluating Internal Control Techniques.** Control objectives, inherent risks, and control techniques in an event cycle are the principal ingredients of an internal control review. Control objectives are established because a risk exists, and internal control techniques are implemented to prevent the specific risked event from occurring. For example, payment for goods and services entails the risk that payments may not be made in accordance with the Prompt Payment Act (P.L. 97-177, 1983). Therefore, an appropriate control objective would be to ensure that invoices are processed in timely enough fashion to enable OFM to make payments in accordance with the Prompt Payment Act, so that GAO does not pay increased interest costs. An internal control technique would be that the appropriate official enters the invoice into GAO's procurement and payment computerized data bases within the Travel and Miscellaneous Payment System (TAMPS) and TAMPS releases the payment voucher before the due date. We evaluated identified internal control techniques by determining their efficiency, effectiveness, comprehensiveness, consistency, and possible excessiveness.

Table 1

Audit Guidelines

Event Cycle	Areas Addressed
Planning	GAO procurement practices are consistent with established federal procurement policies.
Solicitation	Procurement actions simplified or economical to the extent practicable competition is maximized.
Award	Cost/price reasonableness is established.
Administration	Contractor performance is monitored and controls are maintained over airline tickets.
Payment	Requested goods and services are paid for promptly.

• **Step 7: Testing the Internal Controls.** To determine whether the control techniques we identified were (1) being adhered to and (2) achieving the objectives, we tested the internal controls. Testing should be representative of the locations where most procurement activity occurs. For example, we tested internal controls at OAM, OLS, OPPC, and OFPM, since these offices are authorized to purchase goods and services. During the audit planning process, we encountered a criticism: Agencies were using insufficient sampling to perform FIA reviews, that is, audit findings or projections were based on an insufficient number of documents or transactions. To address this criticism, we ensured that our review of GAO included an adequate sampling of purchase orders and contracts.

Within OAM's small purchasing branch, we reviewed a stratified sample consisting of about 10 percent of the purchase orders over $150 but under $10,000 (201 of 2,019). In the over-$10,000 category, we reviewed all purchase orders (151). In other offices, we took a judgmental sample of about 10 percent of all purchase actions. The audit team also reviewed all 28 sole-source contracts awarded in fiscal year 1984, all 26 competitive negotiated contracts, 5 competitive advertised contracts, and 11 interagency agreements. Although the results of our review cannot be projected to all procurements, the review gave sufficient indications of whether GAO units were making procurements in accordance with applicable policies and procedures.

• **Step 8: Finalizing the Internal Control Review.** The internal control review process (steps 1 - 7) served two key purposes: It satisfied the intent of FIA and OMB requirements, and it created the discipline necessary to identify internal control systems problems that may hamper the effectiveness and accountability of GAO units that procure goods and services. Table 1 summarizes the areas our audit guidelines addressed to determine whether GAO's procurement process was vulnerable to waste, loss, or mismanagement in the five event cycles.

Figure 1 depicts the entire internal control review process.

In addition, we sent questionnaires to GAO headquarters divisions/offices and regional and overseas offices to determine whether OAM's services were satisfactory and timely. Although the use of the questionnaire was not part of the audit steps previously described, it enabled GAO officials to provide suggestions or comments on how GAO's procurement process has been improved or how the process could be further improved. Without the questionnaire, that information would not have been captured.

See Controls, p. 57

A Week's Worth

Elle Yerkes

Ms. Yerkes is a management evaluator in the Los Angeles Regional Office (LARO). She joined GAO in 1978 and has worked for the past 3 years in the logistics area of LARO's Navy group. Ms. Yerkes is the GAO representative and public relations chairman for the San Diego Chapter of the American Society of Military Comptrollers. She was graduated from Arizona State University with an M.B.A. degree and a B.S. degree in management and from the University of California, Irvine, with a B.A. degree in fine arts.

Almost Afloat

It wasn't easy, but my colleague, Ken Feng (now in the Washington Regional Office), and I finally received permission from the Navy, via the deputy chief of naval operations office, to go to sea with the USS *Carl Vinson* to check out a Navy aircraft intermediate maintenance department (AIMD) afloat and have a firsthand look at maintenance problems during flight operations. The audit objectives were to identify the causes of these problems and determine their effects upon maintenance quality and productivity. The job scope covered air stations as well as aircraft carriers on the East and West Coasts to enable us to compare data between the fleets and AIMDs, isolate the differences, and make recommendations leading to enhanced maintenance practices Navywide.

Although the Navy prefers not to have women on board a combatant carrier for any length of time, I happen to be a female GAO evaluator, and our visit was to last 6 days. For this and other reasons, whether or not Ken and I were going at all was a matter of conjecture right up to the day before we flew to the San Francisco Bay area, en route to Naval Air Station (NAS) Alameda to board the ship. We planned to cruise with the *Vinson* straight out to sea and then return to shore in a lazy triangle that would bring us into port at NAS North Island, San Diego. We ended up working 15-hour days interviewing, writing, and observing. We saw things we never expected to see and hated to leave the ship. Only at GAO could two GS-12s have had such an exciting opportunity.

Day 1

This morning at work at NAS North Island, the rumor was that the *Vinson* would embark at 1630 hours (4:30 p.m.) tomorrow, but the exact time was classified. Just to be safe, Ken and I decided to fly to Oakland Airport early in the afternoon, and our liaison sent a message to the *Vinson* to arrange a meeting with the AIMD officers as soon as we came on board. Leaving when we did turned out to be a lucky decision because, had we waited, we would have missed the ship.

The taxi driver who picked us up at Oakland Airport cheerfully imparted all the classified information we needed to know. The *Vinson* would sail tomorrow at 5:30 a.m., and everyone had to be on board today at 4:30 p.m. Actually, he was only a little wrong; the carrier was sailing at 6:30 a.m. tomorrow. Whatever. We were on time. He also told us that the *Vinson* would take part in a "Bring-in-the-Fleet" ceremony at sailing time to celebrate Navy Fleet Week. He said that the Navy commissions every unloaded ship in the area to sail down the San Francisco side of the bay, be blessed by a Franciscan monk, and then group and sail back to Alameda as a single body of ships.

Once our informative driver left us on the dock, we found ourselves suddenly in the midst of shiploading activity. Finding the officers' "brow" (gangway), we reached the quarterdeck and attempted to sign in. However, no message announcing our arrival awaited us, and the AIMD officers we were to meet had left the ship. We had no authority to come on board. Fortunately, the Officer of the Day appeared, listened to our story, vouched for our GAO credentials, and then led us to the mess treasurer's office, where we were assigned staterooms, promised towels, and given keys.

We were also shown a floor plan of the carrier. At the time we boarded the *Vin-*

The author, Elle Yerkes (L), and photographer, Ken Feng (R), with Golden Gate Bridge in the background

son, it was the Navy's largest, newest aircraft carrier. It carried about 6,000 people and was about 17 stories high. The hangar deck was the first, or main, deck. We learned we were on the second deck, where the officers' dining mess and wardroom were located and that several more decks were below. Also, close to the mess was a head (rest room) that, 2 days later, sported a handmade sign that read: "Ladies' Room." My stateroom was in the superstructure above the flight deck, on the eighth level. Only one level, a restricted area, was above me. Being a woman counted in the assignment of staterooms, at least. Mine had its own head, a television set, and a porthole. Ken's stateroom was on level three, right under the big cable reels that arrest the incoming planes on the flight deck, one level above. The resultant noise was unique, to say the least, and it was pretty constant once we got underway. Although my stateroom was easy to locate, at the top of a ladder, Ken's was down a labyrinth of passageways, and he consistently got lost the first 2 days out.

While waiting for the AIMD officers to return to the ship, Ken and I walked onto the flight deck, which was 1000 feet long and could store 90 planes with room to spare. We finally caught up with the AIMD commander at dinner that night and made an appointment for 9:00 the next morning to hold our formal entrance conference.

Day 2

Four bells sounded at 6:00 a.m., and the intercom crackled with the command "All hands heave to and trice up." "Trice up" is a term held over from the days when sailors slept in hammocks and had to roll their hammocks around their seabags and secure them with a line.

The brows were raised at 6:30 a.m., pretty much as our cab driver had predicted. Soon the tugboats were moving the *Vinson* away from the dock, and a computerized sign flashed a display over the side: "The Starship Is Underway"—"San Francisco's Own Bids You Goodbye." However, we were soon confined below to keep our entrance conference appointment with the AIMD officers. Luckily, they had a closed-circuit TV in the office, and we could steal glances at what was happening on the flight deck. We saw the land slipping by. An hour later our entrance conference ended, because all the ship's company who could leave their offices were going topside to see the Bring-in-the-Fleet ceremony. Ken and I headed to the area overlooking the flight deck on level eight, where we had a fine view of the proceedings. Afterwards, we returned below.

Several appointments later, we had identified some interesting differences between ship and shore maintenance actions. Then it was dinner time, and we were invited to join the senior officers at the 6:30 staff seating. This day happened to be the Navy's birthday, and the dinner reflected the occasion: We toasted the Navy with apple juice and participated in a lively discussion of why the chaplains originally removed liquor from the Navy ships.

Day 3

Because we had a lot to do in our short time aboard, we scheduled appointments solidly throughout the day. During one of these appointments, we saw the salt-water washdown system in operation on the flight deck over the closed-circuit TV. This system is used in the event of a fire on the deck or to rid the deck of nuclear fallout. In essence, sprinkler heads fed by pumped salt water pop up all over the deck and spray it down.

Our first glimpse of flight operations was also scheduled for this day. Again, we went to the best vantage point around, the bridge on level eight. On the flight deck awaiting the planes were groups of men whose responsibilities were identified by the color of their turtlenecked T-shirts: green for maintenance crew, red for ammunition people, yellow for officers, white for safety teams, purple for fuelers, silver for firefighters, brown for plane captains, white with checks for troubleshooters, and white with a red cross for medical people. Nowhere in the Navy do people so young have as much responsibility as they do on a carrier flight deck, where the average age is 19. These are volunteer positions, and the men receive hazardous-duty pay. Everyone, including Ken and me, was equipped with "Mickey Mouse" ears (acoustically insulated earmuffs), a hedge against the noise that was to come.

The planes landed and began their qualifying exercises. We also observed F-14A aircraft engine-testing on the fantail. Testing the big F-14A engines in the open makes good sense because noise and pollution are swept away in the ocean air. There is no problem with the Environmental Protection Agency (EPA), afloat.

Later, we were able to make a small contribution to Navy aircraft maintenance. The airframes division was having downtime problems with its maintenance information and repair system (MIARS). The constant breakdowns were attributed to the deck vibrations in this area caused by the carrier's propellers, located directly below. Since we had already questioned the adjacent power plants division about their MIARS operations and had found no problems, we suggested that the airframes division relocate their own unit to a new position against the bulkhead that separated them from power plants, abutting the troublefree MIARS.

The captain had some nice words for GAO tonight over the intercom during dinner. Our "in-depth survey of Navy aircraft maintenance problems" was going well.

Day 4

Once the planes were on board to stay, maintenance activities began picking up in all areas. Before and after appointments today, we observed flight-deck mainte-

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Legislative Developments

Judith G. Hatter

Export Administration

Public Law 99-64, July 12, 1985, 99 Stat. 120, reauthorizes the Export Administration Act of 1979 and stipulates that the President may not impose, expand, or extend export controls under section 6(f) of the law until he has submitted a report to the Congress. GAO is to assess the report's full compliance with the intent of the subsection.

Conservation Service Reform Act

On July 29, 1985, the Senate passed S. 410, the Conservation Service Reform Act of 1985, which includes a requirement that the Comptroller General transmit to the Congress before June 30, 1986, a report evaluating the utility and home heating supplier programs of the Residential Conservation Service implemented under part 1 of title II of the National Energy Conservation Policy Act.

United Nations High Commissioner for Refugees Audit

The Foreign Relations Authorization Act, Fiscal Years 1986 and 1987 (P.L. 99-93, Aug. 16, 1985), amends the Migration and Refugee Assistance Act to prohibit payment of funds to the United Nations High Commissioner for Refugees unless the High Commissioner provides for annual program audits. The Comptroller General shall inspect each such audit and submit a report to the Congress.

Legal Services Clinics

The Supplemental Appropriations Act of 1985 (P.L. 99-88, Sept. 15, 1985) provides grants to fund two university centers that will provide legal clinics to supplement the civil legal services of Legal Services Corporation grantees. The clinics will be located at the Loyola University School of Law in New Orleans and the Drake University School of Law in Des Moines, Iowa. The two $3-million grants will be available to the universities' governing bodies to establish endowment funds supporting the centers on a continuing basis. The endowments will be help in trusts that dedicate the income exclusively to fulfilling the stated purposes and are subject to audit by GAO for the sole purpose of determining that all funds have been accounted for or used for such purposes.

Department of Defense (DOD) Authorization Act of 1986

This year's DOD Authorization Act (P.L. 99-145, Nov. 8, 1985) contains several requirements involving GAO:

1. The Comptroller General shall review the organizational structure for defense procurement and report to the Congress concerning the advantages and disadvantages of establishing an agency either within or outside DOD to perform all its procurement functions.
2. The Secretary of Defense shall carry out a demonstration project to test the use in military hospitals of the hospital-management computer system known as the Veterans Administration Decentralized Hospital Computer Program. The purpose of the test is to determine the feasibility and cost-effectiveness of such a system as opposed to a centralized hospital-management computer system, such as the Composite Health-Care System. The Comptroller General shall evaluate the acquisition and implementation of the Composite Health-Care System and the conduct of the

See Developments, p. 57

nance and watched the first planes brought down to the hangar deck undergo repairs. The hangar deck can hold 50 aircraft, all of which are designated positions by the hangar deck control supervisor, working with the squadrons and I-level personnel. Aircraft placement is determined by a mix of the type of maintenance required, the proximity of pressure lines, and the need for the aircraft during the next flight schedule. Repaired aircraft were sent topside to the flight deck via one of the *Vinson*'s four elevators, which each carry four planes at a time.

Maintenance on the flight deck was reserved for minor repairs and replacements, much like the flightlines operations on shore. When a plane taxied into the maintenance area of the flight deck, the maintenance crews in their green shirts swarmed over it immediately. Planes did not remain there long; they were either put in the line for takeoff or sent down to the hangar deck for more serious repair work by the AIMD divisions.

We also learned today that we had buying privileges in the ship's store. Ken and I succumbed to buying USS *Carl Vinson* patches to put on jackets, and Ken bought one of the *Vinson* baseball caps, which were very popular on board ship.

Day 5

Today, as another interview with the AIMD officer was drawing to a close, we were warned that a "general quarters" alarm would soon go off and that we should be very close to our staterooms when this happened, because civilians were supposed to "secure" in staterooms. Consequently, at the end of our discussion, we quickly returned to our rooms to catch up on writing the records of our interviews. My confinement to quarters was without incident. Ken, however, discovered that two sailors were busy laying new carpeting in his stateroom. The alarm sounded shortly thereafter, and he found himself playing host for the next 2 hours.

Sounding "general quarters" in the Navy means "prepare for enemy attack." It is the call to battle stations. Each sailor has something to do, even if it is just to report to the galley and start making up stacks of peanut butter sandwiches to sustain the fighting men during the attack. All doors are shut, locking bars secured, and hatches closed. The ship divides into teams: nuclear rescue teams, medical teams, damage control teams, and so on. There is an immediate rush into action.

Limited workspace on the hangar deck

"General quarters" over, we went to another scheduled appointment. During this interview, we learned that a retired Navy man was to be buried at sea. We listened respectfully to "taps" and caught a glimpse of the tall, Marine coffin-bearers in their dress blues over the closed-circuit TV. We were told that this ceremony happens often at sea.

Tonight we saw night flying for the first time. Seas were heavy, and the pilots landed on the heaving deck with only the "meatball" (a tiny decklight) to guide them in. The only stationary lighting was an infrared light on the superstructure and the small domed lights defining the flight path on the flight deck. When a fighter plane's tailhook did not extend fully into position, everyone felt the danger. The pilot had to go around and make touch-and-go landings twice more before the tailhook would engage.

Day 6

The morning was spent cramming as many discussions as possible into a few hours. Ken and I went our separate directions, always escorted by an officer from AIMD. Going up and down the ladders, occasionally we caught a glimpse of the sea. We saw San Clemente Island going by and then ducked below decks for our exit conference.

Topside, all planes were secured, and maintenance actions were nearly at a standstill. The ship was preparing to dock. The exit conference over, we went up to the hangar deck to see the brows swing into position. Just as we were preparing to step onto the quarterdeck, the captain and his executive officer appeared to tell us

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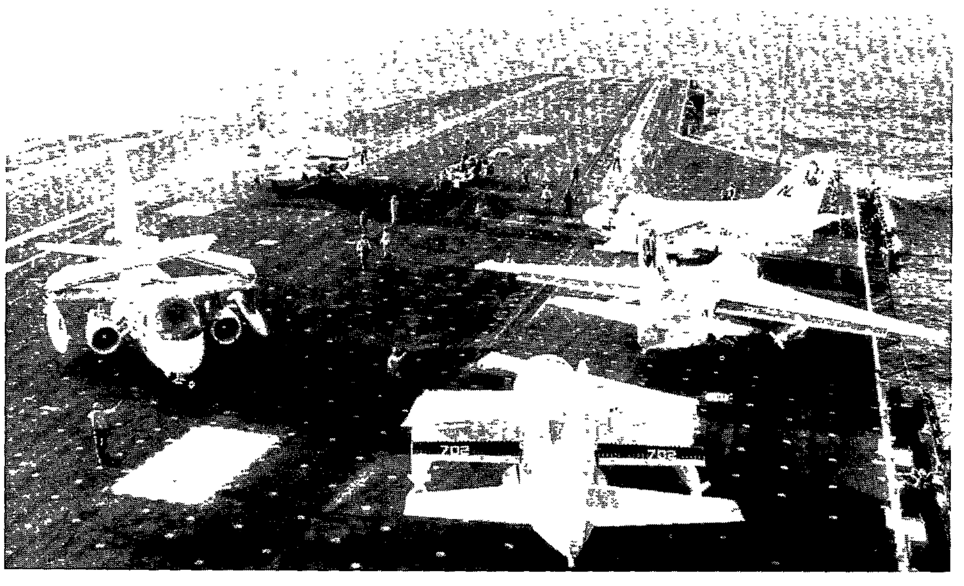
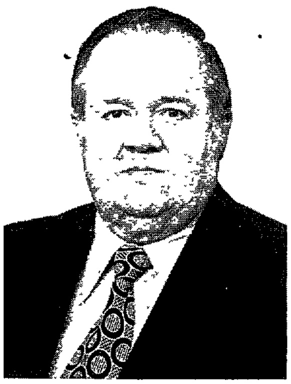


S-3 Anti-Submarine aircraft awaiting take-off at rush hour

Senior GAO Staff Changes

Ed. Note: The staff changes below and in the following sections occurred during the approximate period July to September 1985.



Baltas E. Birkle

Mr. Baltas E. (Gene) Birkle retired from GAO as special assistant to the Assistant Comptroller General for Operations on January 6, 1986. Before his appointment as special assistant, Mr. Birkle had served 3 years as deputy director for operations ir the Resources, Community, and Economic Development Division (RCED).

He joined GAO in June 1956. During his GAO career Mr. Birkle handled such diverse audit assignments as the Department of the Interior, the Tennessee Valley Authority, the U.S. Postal Service, the National Aeronautics and Space Administration, the General Services Administration, the Veterans Administration, and the Department of Housing and Urban Development. He also served 2 years on GAO's former Accounting and Auditing Policy Staff and 9 years as deputy director of RCED's predecessor divisions.

Mr. Birkle received both a B.S. degree in accounting (in 1951) and an M.A. degree in economics (in 1953) from the University of Maryland, then served in the U.S. Navy from 1953 to 1956. In 1964, he attended the Program for Management Development at the Harvard Business School.

Mr. Birkle, a certified public accountant (Maryland), holds memberships in the American Institute of Certified Public Accountants and the District of Columbia Institute of Certified Public Accountants. He received a GAO Career Development Award in 1968, a GAO Distinguished Service Award in 1978, and a Division Director's Award in 1982.

F. Kevin Boland

Mr. F. Kevin Boland has been appointed deputy director for operations in the Resources, Community, and Economic Development Division (RCED). He had been serving as RCED's senior associate director responsible for GAO's energy reviews and as the chief spokesperson for GAO on energy issues. During the past 22 years, he has worked on GAO audits and analyses of activities in six major federal departments. He spent 10 years in the energy area.

Mr. Boland has also served as chairman of the professional audit review team (PART) established under title I of the Energy Conservation and Production Act. The act requires the Comptroller General to designate a chairman for PART, which consists of representatives from six designated federal agencies. PART performs a thorough annual performance review of the Energy Information Agency in the Department of Energy, prepares a report describing its investigation, and reports its findings to the President and the Congress.

Mr. Boland joined GAO in 1962 after graduating from the University of Scranton with a B.S. degree in accounting. He has completed specialized courses in government and business relations at George Washington University and the Executive Development Program at Dartmouth College.

Mr. Boland has received several GAO awards during his career, including the Comptroller General's Distinguished Service Award, and a meritorious rank in the Senior Executive Service. He was recognized in June 1978 by the William A. Jump Memorial Foundation for noteworthy service in public administration.

Thomas J. Brew

Mr. Thomas J. Brew has been appointed associate director (Army) in the National Security and International Affairs Division.

Mr. Brew joined GAO's Denver Regional Office (DENRO) in 1970. From 1971 to 1973 he worked in DENRO's sublocation at Hill Air Force Base, Utah, and from 1974 to 1978 he worked in the European Office. In 1978 he was assigned to the staff of the office of the director, Field Operations Division, where he remained until 1982.

In 1982 Mr. Brew became an assistant regional manager of the Washington Regional Office (WRO). He served as WRO's acting regional manager from May to October 1983 and as assistant regional manager for operations until November 1984, when he was selected for the Executive Candidate Development Program.

Mr. Brew graduated from Montana State University with a B.S. degree in commerce. He has received several awards, including the Division Director's Award in the former Field Operations Division and the Regional Manager's Award in WRO.

John P. Carroll

Mr. John P. Carroll was appointed manager of the Seattle Regional Office in October 1985.

Mr. Carroll joined GAO's New York Regional Office in 1958. From mid-1963 to early 1966, he served on the internal audit staff of the then-Federal Aviation Agency in New York. Mr. Carroll rejoined GAO in the Washington Regional Office (WRO) in 1966 and, except for a 1-year assignment in the former Defense Division, served with WRO until he was appointed Seattle's manager in July 1976. He became manager of the Cincinnati Regional Office in August 1979.

Mr. Carroll earned an undergraduate degree in accounting from Iona College in New York. He attended the Dartmouth Institute in July 1974 and participated in the Brookings Institute conference for senior executives on public policy issues as well as the Executive Leadership and Management Program of the Federal Executive Institute. He has also attended programs at Georgetown and Seattle universities.

James Duffus III

Mr. James Duffus III has been appointed associate director (fossil energy and renewable resources) in the Resources, Community, and Economic Development Division (RCED).

Since joining GAO in 1962, Mr. Duffus has worked in the former Civil Division, the former Energy and Minerals Division, and RCED on audits and analyses of activities in six major federal departments.

Most recently, Mr. Duffus served as the energy planning director and assistant to the senior associate director for the energy issue area in RCED. He has also served as the staff director of the professional audit review team (PART), an interagency audit group established under title I of the Energy Conservation and Production Act.

Mr. Duffus received his B.S. degree in accounting from St. Vincent College in Pennsylvania and completed the Executive Development Program at Dartmouth College. He received Outstanding Performance Awards in 1964 and 1977, Division Director's Awards in 1977 and 1984, and a GAO Meritorious Service Award in 1980. Mr. Duffus is a member of the National Association of Accountants.

David V. Dukes

Mr. David V. Dukes became executive director of the Joint Financial Management Improvement Program (JFMIP) in October 1985, succeeding Mr. Susumu Uyeda, who retired in 1984. JFMIP, a cooperative program aimed at improving public sector financial management, is cosponsored by GAO, the Treasury, the Office of Management and Budget, and the Office of Personnel Management.

Mr. Dukes came to JFMIP from the Department of Health and Human Services, where, as deputy assistant secretary for finance, he was responsible for accounting, fiscal, and budget policies; development and improvement of department-wide accounting systems; and operation of major financial systems. He has held other financial and auditing posts in GAO's Denver Regional Office; the National Aeronautics and Space Administration; the former Department of Health, Education, and Welfare; and the General Electric Company.

Sarah P. Frazier

Ms. Sarah P. (Sally) Frazier has been appointed associate director (management reviews and Financial Integrity Act) in the Resources, Community, and Economic Development Division. Her appointment was effective September 1985.

Ms. Frazier worked as a senior staff member on the Comptroller General's Task Force on Reports upon joining GAO in 1982. She was named assistant director for quality assurance systems when the Office of Quality Assurance was created in December 1982. Among her group's projects were developing the executive summary format; redesigning GAO's product line; establishing design, methodology, and technical assistance groups; and initiating the report conference concept. Ms. Frazier was selected for the Executive Candidate Development Program in 1984.

Before joining GAO, Ms. Frazier was a principal at Arthur Young & Company, and, before that, she was employed by the U.S. Navy and the Commission on Professional and Hospital Activities.

Ms. Frazier received a B.A. degree from Duke University and an M.A. in sociology and research methods from American University. She is a member of the American Society for Public Administration.

Keith O. Fultz

Mr. Keith O. Fultz has been appointed associate director (nuclear energy and electricity) in the Resources, Community, and Economic Development Division. His appointment was effective October 1985.

Mr. Fultz, who joined GAO in 1969, has worked in the former Civil, International, Manpower and Welfare, and Community and Economic Development divisions. Before being selected for the Executive Candidate Development Program in August 1984, Mr. Fultz directed GAO's audit work at the Department of Agriculture. He has since been assigned to the Office of Congressional Relations and, subsequently, to the Norfolk Regional Office.

Mr. Fultz received a B.S. degree in 1969 from Shippensburg State College in Pennsylvania and has taken specialized courses and programs at George Washington, Pennsylvania State, and Georgetown universities. He is presently enrolled in American University's Key Executive Program. Mr. Fultz has received several GAO awards.

John W. Harman

Mr. John W. Harman has been appointed associate director (agriculture) in the Resources, Community, and Economic Development Division (RCED).

Since joining GAO in 1966, Mr. Harman has reviewed programs at the Department of Commerce; the Department of Housing and Urban Development; and the former Department of Health, Education, and Welfare. He has also audited the U.S. Postal Service, the Energy Research and Development Administration, and the Energy Information Administration.

In 1978 Mr. Harman was named assistant director of the Office of Program Planning (OPP) and later served as OPP's acting director. In 1980 he became group director for GAO's work on the Department of Energy's (DOE's) nuclear energy programs and served as DOE's acting associate director from 1981 to 1982. Mr. Harman has also served as RCED's energy issue-area planning director and assistant to the senior associate director for energy. In 1984, he was the project director for GAO's second annual managers' meeting at Leesburg, Virginia. He joined the Executive Candidate Development Program in 1985.

Mr. Harman received his B.S. degree in business administration, with an emphasis on accounting, summa cum laude, from Fairmont State College in West Virginia. He has taken postgraduate courses at George Washington University and has attended the Federal Executive Institute as well as the University of Virginia.

Donna M. Heivilin

Ms. Donna M. Heivilin has been appointed associate director (Navy) in the National Security and International Affairs Division (NSIAD).

Ms. Heivilin has been with GAO since 1974. From 1983 to 1984, she established, organized, and directed the design, methodology, and technical assistance group for the newly formed NSIAD. From 1974 to 1982, she worked on assessments of the congressional and executive budget processes and budget concepts. During 1982 and 1983, Ms. Heivilin managed the Comptroller General's Defense Budget Task Force. In 1984 she joined the Executive Candidate Development Program.

Ms. Heivilin received a B.A. degree in 1959 from the University of Minnesota and an M.P.A. degree in 1974 from George Washington University. She is completing her doctorate in public administration by developing a dissertation comparing state budgeting principles and practices.

Ms. Heivilin has received GAO Letters of Commendation, a Comptroller General's Meritorious Service Award, and Certificates of Merit.

Gary L. Kepplinger

Mr. Gary L. Kepplinger has been appointed assistant general counsel, special studies and analysis, Office of the General Counsel (OGC). He had served as acting assistant general counsel since January 1985.

Mr. Kepplinger received his B.A. degree from George Washington University in 1971 and his J.D. degree, magna cum laude, from DePaul University College of Law in 1974. A member of the Illinois Bar, he began working in OGC in 1974 and has worked in special studies and analysis since then.

Mr. Kepplinger received a Certificate of Merit in 1979 from the former Community and Economic Development Division and a Certificate of Merit in 1981 from OGC. He received the OGC Outstanding Achievement Award in 1983, 1984, and 1985.

Nancy R. Kingsbury

Ms. Nancy R. Kingsbury has been appointed associate director (Air Force) in the National Security and International Affairs Division.

Ms. Kingsbury joined GAO in 1984 as the first member of the Executive Candidate Development Program to be selected from outside GAO. She had worked at the Office of Personnel Management, where she was responsible for making policy on health and physical requirements for federal employment. From 1979 to 1981, Ms. Kingsbury was the director of resource management for the Peace Corps. She entered the federal government in 1969 as a research psychologist at the National Bureau of Standards.

Ms. Kingsbury holds a B.A. degree from the University of Miami. She received an M.A. degree and a Ph.D. in experimental psychology and analytical methods from Johns Hopkins University. She is secretary-treasurer for the Evaluation Research Society and holds memberships in the American Society for Public Administration, the Evaluation Network, and the Human Factors Society.

Among other awards, Ms. Kingsbury received the U.S. Civil Service Commission's Special Citation (1977) and a Special Achievement Award from the director of the Peace Corps in 1981.

Oliver W. Krueger

Mr. Oliver W. Krueger has been named special assistant to the Assistant Comptroller General for Operations. He was formerly with the Resources, Community, and Economic Development Division.

Since joining GAO in 1959, Mr. Krueger has worked in the Detroit Regional Office and, for the last 12 years, in Washington, D.C., in the environment, agriculture, and transportation areas.

Mr. Krueger received a B.S. degree in accounting from Ferris State College in Michigan and attended the University of Michigan for specialized courses. In 1974 he attended the Executive Program in Business Administration at Columbia University. He also attended the Federal Executive Institute's Program in Executive Leadership and Management in 1980 and the Dartmouth Institute's Executive Program at Dartmouth College in 1982.

Mr. Krueger is a certified public accountant (Michigan) and a certified internal auditor. He is a member of the American Institute of Certified Public Accountants, the Michigan Association of Certified Public Accountants, and the Association of Government Accountants. He received GAO Meritorious Service Awards in 1961, 1976, and 1981. In 1985 he received a GAO Distinguished Service Award.

Location, from p. 8

cruiting effort and noted progress in the fiscal year 1985 recruiting statistics. HEPM conferences are usually held before the start of each recruiting cycle to enable HEPMs to fully participate in the process.

Near the end of their sessions, the HEPMs joined GAO staff, as well as the 1985 IAFP Fellows, in attending a September 11 salute to Hispanic Heritage Week. Mr. Espada and Trish Zemple, former chair of the Women's Advisory Council, opened the ceremony, and Milton J. Socolar, Special Assistant to the Comptroller General, provided remarks. Members of the group, Mariachi Los Amigos Los Quetzales, shared music and dancing in a colorful, cultural presentation of Hispanic lore.

The spring, summer, and fall 1985 issues of "Recruiter's Update," published by the recruitment and examination branch of Personnel, provide additional Hispanic recruitment information and may be obtained in room 4650 or by calling (202) 275-3147.

Manager's, from p. 11

Passion, Pride, and People

Chapter 7 of *Passion*, "Quality Is Not A Technique," is only about eight pages long, but it is at the heart of the book. The authors say, "In fact, this entire book is about quality." However, you will not read about quality circles, statistical quality control, or robotics. Instead, you will read that quality is about passion, pride, and people. Quality "devices" can be valuable, but "only if managers—at all levels—are living the quality message, paying attention to quality, spending time on it. . . .Quality comes from people. . .who care and are committed."

The authors tell of a seminar Peters was giving to a group of managers from a retail company. His pitch was that service to customers in retailing was a disgrace. After listening for some time, one of the managers interrupted and told Peters to "get off our case." After all, the manager argued, "We are no worse than anybody else." Peters directed his graphic designers to draw up a logo with that slogan. Now there's a rallying cry for mediocrity if I ever heard one!

Let's hope that we will not merely set our sights on being "no worse than anybody else." If that is our goal, then we will undoubtedly face the predicament outlined in the title of Robert Campbell's book on leadership: *If you don't know where you are going, you'll probably end up somewhere else.* The challenge, then, is to uncover ways of instilling not only the passion for excellence but also the pride and sense of ownership that make managers and staff strive for quality in all our products. At a recent training program for GAO's Senior Executive Service candidates, Dr. Peter Vaill of George Washington University talked about his participa-

See Manager's, p. 55

Manager's, from p. 54

tion in the research that went into *Passion*. He told of a dinner attended by many of the business and government leaders profiled in both *Search* and *Passion*. During the dinner he sat next to Frank Perdue.

Starting with the appetizer course, and continuing on all the way through dessert, Perdue could talk of nothing else but a new device he was acquiring for his chicken farm, a chicken eviscerator. While this may not seem like the most appropriate dinner conversation, Perdue went on and on about the virtues of this new machine. It was clear to Dr. Vaill that Perdue not only knew chickens, he was downright passionate about them. He not only had a passion for excellence, he had a passion for chickens!

And that, basically, is the message of Peters and Austin. You have got to have that passion for chickens—the product—before you can really have that drive and passion for excellence.

Topics, from p. 13

experiment can be generalized to the intervention that would actually take place in a full-scale operation of the program.

Constructs/Measures

Constructs and measures constitute another element for which questions about our ability to generalize may arise. (These concerns are sometimes addressed under the heading "construct validity.") The NIT experiment posed a question about the work response of families eligible for income benefits. Work response is an abstract concept, a construct, which must be translated into something that can be measured. In the NIT evaluation, families were asked during their interviews to report earned income and the number of hours worked. These measures were taken as the concrete representations of the more abstract notion of work response, even though the measures might not adequately capture what someone might regard as work response. In other words, generalizing results about earnings as reported in the experiment to the more abstract concept of work response may not be possible.

For example, Rossi and Lyall observe that the NIT experiment used individual and household income measures from the Current Population Survey and the decennial census, and that these measures have been extensively criticized. One argument against these measures is that they omit substantial amounts of fugitive or forgotten income. By default, hours worked became the main indicator of work response in the NIT experiment, but that measure was not fully satisfactory either.

Setting

Finally, whether the results from an evaluation, conducted in a particular setting, can be generalized to another setting is questionable. The setting for the NIT experiment was the United States from 1968 to 1972. Can the results be generalized to the United States at some later time when a full-scale implementation might take place? (Concerns about conditions peculiar to New Jersey and Pennsylvania have already been treated as part of the unit generalization issue.)

Doubts will always exist about whether results from an audit or evaluation will carry over to a new time. Sometimes we have good reason to seriously question our ability to generalize to another time, as when the health of the economy might influence the results in a NIT experiment. The shorter the time span between empirical data and the future application, the better. However, as Lee Cronbach, an evaluator who has done much thinking about generalization, says, "generalizations decay," and little can be done to formally eliminate doubts about generalizing to the future.

For More Information

Bracht, G.H. and G.V. Glass. "The External Validity of Experiments." ***American Educational Research Journal*, 5, No. 4 (1968), pp. 437-474.** Covers threats to external validity, another term for the ability to generalize, in depth.

Cederblom, J. and D.W. Paulsen. ***Critical Reasoning*. Belmont, CA: Wadsworth, 1982.** Puts generalizing, as discussed here, in the larger context of generalizing as viewed by philosophers.

Cook, T.D. and D.T. Campbell. ***Quasi-Experimentation: Design and Analysis Issues for Field Settings*. Chicago: Rand-McNally, 1979.** Includes advice for increasing the ability to generalize.

Cronbach, L.J. ***Designing Evaluations of Educational and Social Programs*. San Francisco: Jossey-Bass, 1982.** Covers in greater detail ideas dealt with in this article. Cronbach sets forth his framework for characterizing issues involving the ability to generalize.

Kruskal, W. and F. Mosteller. "Representative Sampling, I-IV." ***International Statistical Review* (1979), pp. 13-24, 111-127, and 245-265; (1980), pp. 169-195.** Treats issues of generalizing from sample units to populations in a largely nontechnical way.

Rossi, P.H. and K.C. Lyall. ***Reforming Public Welfare: A Critique of the Negative Income Tax Experiment*. New York: Russell Sage Foundation, 1976.** Describes the NIT experiments. Useful for its systematic examination of the strengths and weaknesses of the design and execution of the New Jersey-Pennsylvania experiment.

Costs, from p. 17

build due to lack of funds, they often claim these forced cuts as cost-saving initiatives. Ironically, if program costs had been more accurately presented in the first place, many marginal programs would never have fit into the budget proposals anyway.

The credibility of claimed acquisition savings, however, is not the important issue, since they do not address the major structural problem of unrealistic cost estimates. Over the same period as that covered by the cost-saving program (1981 to 1989), total procurement in DOD is planned at nearly $800 billion, and cost overruns are likely to continue at 30 percent or more. Even if DOD's Acquisition Improvement Program savings were fully achieved, they would represent a savings of only about 4 percent.

What Can We Expect?

The cost estimates in the current DOD 5-year plan are likely to become even more optimistic as the Congress holds the line on overall defense authorizations. Even given the implications of the Gramm-Rudman-Hollings Act (P.L. 99-177, Dec. 12, 1985), which requires mandatory reductions in defense spending to reduce the federal deficit, major programs involving missiles, ships, aircraft, and the military use of space are not likely to be cancelled. Most likely these systems will appear less expensive on paper than they actually are; at the same time, they will take longer to complete.

See Costs, p. 56

Costs from p. 55

Table 1

Acquisition Improvement Program: Total Estimated Savings, 1981-1989 (in billions)

Acquisition	Total Savings
Lower cost alternatives	1.4
Productivity enhancements	.5
Multiyear contracting	4.7
Economic production rates	2.8
Cancel/Reduce marginal programs	18.7
Other	6.2
Total	34.3

Source: Department of Defense, "Third Annual Report," Defense Acquisition Improvement Program, April 1984, p. 2.

Particularly over the next several years, congressional committees that budget, authorize, and appropriate defense funds will have to make hard decisions on what will shape our long-term defense policy. To accomplish this, developing a more accurate perspective on the out-year consequences of these decisions is critical. Few procurement reforms, and no major ones, are likely. Only one of the procurement changes sought by the House of Representatives—barring contractors from asking reimbursement for certain costs—was passed in the fiscal year 1986 defense budget. Given this situation, the Congress must come to understand that figures supporting new weapon systems, weapon system enhancements, and quantity increases represent the systems' *realistic minimum* cost. With this as a starting point, the Congress must then insist on knowing the range of cost growth inevitably associated with each system and consider appropriate adjustments to ensure the affordability of the defense program as a whole. The unaffordable portion of defense plans contributes little to actual defense capability.

Statements, from p. 31

and accounting systems to better serve management, policymakers, and taxpayers. The GAO report, "Managing the Cost of Government: Building an Effective Financial Management Structure," previously mentioned, addresses financial management from a government-wide perspective. Also, we will continue monitoring implementation of the Federal Managers' Financial Integrity Act, which requires agencies to annually assess the quality of their internal controls and to report to the President and the Congress. We will report to the Congress soon on the second-year implementation of the act. In addition, we will soon complete the final portion of title 2, which will set forth the standards for financial management systems. This portion will cover such things as integration of budget and accounting, account structure, and transaction coding.

At the department and agency level, we believe it is important to begin pilot reviews of the summary financial statements of selected agencies. Our objective is to audit the consolidated financial statements of the federal government and render an opinion on the fair presentation of those statements in accordance with title 2 within the next few years. Needless to say, this is a tremendous task that we realize cannot be accomplished by GAO alone. However, our initial thoughts show that audits of financial statements will be necessary at the department/agency level first, and we will count on the experience gained on the pilot reviews to begin audits of agency financial statements a year or so from now.

At the overall consolidated federal government level, we are currently involved in two projects bearing on the financial statements. First, we are participating in a project with the Auditor General of Canada (my Canadian counterpart) to determine the needs for federal government information by users of such information. Although the project has been open to consider all needs, the focus is on information that should be contained in summary-level statements and in a summary-level report. Thus far, the preliminary findings of user needs have generally confirmed what have been discussed as needs in the past.

Second, we are studying some of the important issues involved in the government-wide consolidated financial statements. Over the past 10 years, the U.S. Treasury has been preparing prototype government-wide statements. Within these statements there are some issues not fully resolved that require further study. The prime example is Social Security, and the major question on this issue is how best to disclose the actuarially computed liability in the financial statements. Title 2 recognized that the reporting of Social Security requires further study. Although title 2 currently requires the actuarially computed liability to be shown on the face of the financial statements of the federal government, there are some compelling arguments that these liabilities should best be disclosed in the footnotes to the financial statements. Some of the other areas under study are reporting on major weapon systems, performance measures, and consolidation issues.

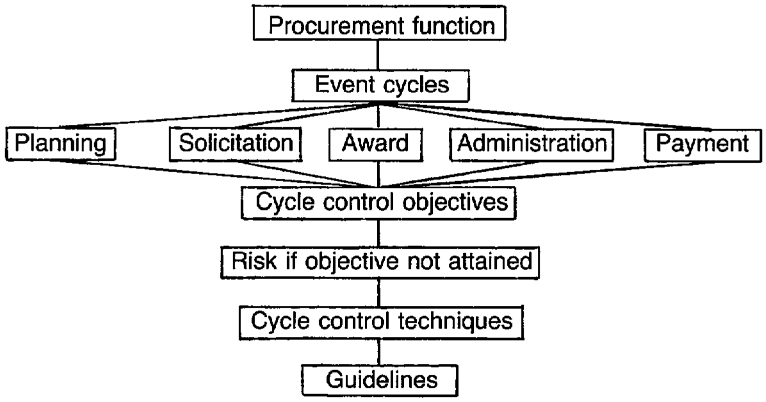
★ ★ ★ ★ ★

A modern financial management structure that produces needed reports and statements at the program, activity, and project levels as well as the agency-wide and government-wide levels will not cause the deficit to disappear, nor will it make difficult financial decisions easy. But it can ensure that congressional and executive branch officials, taxpayers, and others needing federal government financial data receive timely, reliable, and consistent information with which to make decisions and assess performance; it can also ensure that we spend the resources entrusted to us in an efficient and cost-effective manner. We need management systems that serve the needs of users not only now but also in the years ahead.

Controls, from p. 46

Figure 1

Internal Control Review Process



Lessons Learned

The time and resources allocated by the Assistant Comptroller General's task force indicate a firm commitment to implementing the intent of FIA within GAO's procurement operations. The audit program used in this review can be used, with minor modifications, government-wide to perform internal control procurement reviews. The audit team also gained valuable knowledge from this exercise that can be applied to those future procurement audits that GAO anticipates performing at other agencies.

Almost Ashore

The cruise was not officially over. For two GAOers to see the might of a small part of our Navy at work on the sea had been an experience without parallel, the opportunity of a lifetime. Exposure to the ocean environment's impact on aircraft repair and the related problems would have been impossible to obtain anywhere but on a carrier under deployment/operations conditions. All that remained now was to sincerely thank the captain for allowing us to be a part of his ship for those 6 days. We will never forget it.

Week's Worth, from p. 49

that our program manager, Karl Deibel, was coming on board. The Navy had made arrangements for him to fly to the ship and be present at the exit conference, but because the message had not reached the right person, he had missed the conference. Once Karl was aboard, the AIMD maintenance officer escorted us on visits to several more I-level divisions, and we again toured the ship, from the officers' mess to the flight deck.

The *Vinson* was to remain in San Diego the rest of the day, deploying to somewhere in the Pacific the following morning. Most of the ship's company had shore leave until then, rotating in groups to allow the ship to be partially staffed at all times. The green flag that had been flying on the superstructure to signal that no admiral was on board was exchanged for a blue flag with two white stars on it, denoting that the admiral was now taking command of the carrier force.

Developments, from p. 50

demonstration project and report to the Congress.

3. The Secretary of the Army may provide uranium tetrafluoride (green salt) from stockpile materials to a contractor for the production of conventional ammunition for the Army. However, the Secretary must first certify to the Congress that, among other things, the material was not available to the contractor from commercial sources at a reasonable price (to be determined by the Comptroller General).
4. The Comptroller General shall report to the Congress the results of a study to determine (1) the educational needs of members of the armed forces and civilian employees of DOD and their dependents stationed outside the United States, (2) the most effective and feasible means of meeting such needs, and (3) the cost of meeting these needs.
5. Not later than March 15, 1988, the Comptroller General shall submit a report to the Congress on the effectiveness of the program of cash awards for disclosures, suggestions, inventions, and scientific achievements leading to cost savings.

Legal Fees Equity Act

On August 1, 1985, Senator Strom Thurmond of South Carolina introduced S. 1580, the Legal Fees Equity Act, which requires the Comptroller General to report annually to the President and the Congress on the amount of attorneys' fees and related expenses awarded during the preceding fiscal year against the United States, or against state or local governments, in judicial and administrative proceedings to which the act applies. No action has been taken yet on the bill, which was referred to the Senate Committee on the Judiciary.

Other GAO Staff Changes

Additional Staff Changes

Name	Division/Office	Title
Maris, Karen A.	Office of the General Counsel	Senior Attorney

New Staff Members

Name	Division/Office	From
Miller, Adelle S.	General Government Division	Not specified
Sehgal, Ellen	Human Resources Division	Department of Labor
Fields, James M.	National Security and International Affairs Division	NASA Langley Research Center
Smith, Scott L.	National Security and International Affairs Division	Arizona State University
Beavers, Barbara	Resources, Community, and Economic Development Division	McDonald's Inc.
Donovan, Kelly	Resources, Community, and Economic Development Division	Executive Court Reporters
Souther, Laura	Resources, Community, and Economic Development Division	Zales Jewelers
Fangman, Karin K.	Office of the General Counsel	University of Pittsburgh
Ikwild, Jeannette M.	Office of the General Counsel	Syracuse University College of Law
Jordan, Christine	Office of the General Counsel	American University Washington College of Law
Kauffman, Rochelle G.	Office of the General Counsel	Vanderbilt University School of Law
Sajewski, Jane R.	Office of the General Counsel	Georgetown University Law Center
Greco, Leo	Office of Information Resources Management	Dept. of the Treasury
Brown, M. Lucille	Personnel	Office of Personnel Management
Clark, Antoinette E.	Personnel	General Services Administration/ National Archives

New Staff Members (cont.)

Name	Regional Office	From
Appel, Charles J.	Boston	University of Arizona
Farbstein, Kenneth M.	Boston	Harvard University
Fleming, Susan A.	Boston	Cornell University
Gilman, Diana	Boston	Dept. of Health and Human Services
McCloskey, Judith A.	Boston	Harvard University
Mooers, Theresa C.	Boston	Bureau of the Census
Gallagher, Patrick	Chicago	DePaul University
Martinez, Steven	Chicago	Indiana University
Morris, Regina L.	Chicago	Carnegie-Mellon University
Moten, David R.	Chicago	Northern Illinois University
Oestriecher, Sharon	Chicago	Private industry
Petrovich, Gary L.	Chicago	University of Illinois
Rajewski, Ellen	Chicago	Indiana University
Sansaver, Robert A.	Chicago	Northern Illinois University
Bozzelli, Diane M.	Cincinnati	Miami University
Enriquez, Michael J.	Cincinnati	Mississippi University
Siller, Carrie	Cincinnati	Railroad Retirement Board
Brown, Ricki E.	Denver	Mississippi State University
Christian, Catherine L.	Denver	Ohio State University
Kuhlmann, Mary Jo	Denver	University of Cincinnati
Garza, Javier	Detroit	Eastern Michigan University
Herrmann, Richard	Detroit	U.S. Army—Civilian
Klostermann, Robert A.	Detroit	Internal Revenue Service
Kubiak, Lawrence	Detroit	University of Detroit
Lindsay, Margaret	Detroit	University of Michigan
Ockunzzi, Louis	Detroit	Cleveland State University
Scales, James	Detroit	National Bank of Detroit
Baggio, Mark F.	Kansas City	Creighton University
Cline, Julie	Kansas City	University of Oklahoma
DiRaimo, Cecilia	Kansas City	University of Missouri

New Staff Members (cont.)

Name	Regional Office	From
Durland, Laura	Kansas City	University of Missouri
Prudente, Annamarie	Philadelphia	Pierce Business School
Schrager, Edythe	Philadelphia	University of Miami
Walker, Michelle	Philadelphia	Syracuse University
Irwin, Steve	San Francisco	Stanford University
Jones, David	San Francisco	Howard University
Kotler, Ellen	San Francisco	University of Southern California
Moreno, David	San Francisco	Fresno State University
Plate, Elise	San Francisco	Stanford University

Attritions

Name	Division/Office
Carter, Linda M.	General Government Division
Fijimoto, Clarence	General Government Division
Best, Mary	Human Resources Division
Nash, John	Human Resources Division
Forman, Mark A.	National Security and International Affairs Division
Goldman, Janet	National Security and International Affairs Division
Ingeles, Hawthorne A.	National Security and International Affairs Division
Montgomery, Sarah M.	National Security and International Affairs Division
Biscan, Matthew Y.	Office of the General Counsel
Gaines, Joy E.	Office of the General Counsel
Pitts, Anita D.	Office of the General Counsel
Williams, Seomone C.	Office of the General Counsel
Simms, Patricia	Office of Information Resources Management
Wesberry, James	Office of International Audit Organization Liaison
Englert, R. George	Joint Financial Management Improvement Program

Name	Regional Office
Ellis, Charles W.	Boston
Lunardo, Mark S.	Boston

Attritions (cont.)

Name	Regional Office
Nicoli, Gale M.	Boston
Szeto, Arthur K.	Boston
Dunlap, Lennette	Chicago
Evans, James	Chicago
Meyer, Kathleen	Chicago
Peritz, Elyse B.	Chicago
Craddock, Beverly R.	Cincinnati
Smith, Connie M.	Cincinnati
Menghi, James P.	Denver
Sandoval, Janet E.	Denver
Mikami, Robert	Los Angeles
Placencia, Eduardo	Los Angeles
Truong, Jean-Francois	Los Angeles
White, Gloria	Los Angeles
Hinkel, Donna	Philadelphia
Brand, Tom	San Francisco
Hom-Yip, Gale	San Francisco
Hieb, Alvin	Seattle

Retirements

Name	Division/Office	Title
Dayton, Austin	Accounting and Financial Management Division	Senior accountant
Livingston, Rebecca	Human Resources Division	Editor
Hock, Paul G.	National Security and International Affairs Division	Evaluator
	Regional Office	**Title**
Kuchinski, Clifton L.	Boston	Evaluator
Dowell, John A.	Detroit	Assistant regional manager
Kinyon, Wayne	Kansas City	Evaluator
Elliott, John	Philadelphia	Evaluator
Komykoski, Frank	Philadelphia	Evaluator
Stuart, Jack R.	Philadelphia	Evaluator

Deaths

Name	Division/Office	Title
Bahlman, Leonard J.	Office of Information Resources Management	ADP administrator

Ed. note: GAO staff engaged in the following professional activities during the approximate period July to September 1985.

Professional Activities

Office of the Comptroller General

Charles A. Bowsher, Comptroller General, addressed the following groups:

Washington International Business Council, Washington, July 30.

Wharton public policy fellows, Washington, Aug. 1.

Beta Alpha Psi accounting fraternity, Reno, NV, Aug. 16.

Second Annual International Financial Management Conference, cosponsored by The Chartered Institute of Public Finance and Accountancy and The International Consortium on Governmental Financial Management, London, England, Sept. 17.

Association of Government Accountants, Nashville Chapter, Nashville, Sept. 30.

Accounting and Financial Management Division

Frederick D. Wolf, director:
Addressed the Financial Executives Institute's committee on government liaison concerning financial management and the role of a chief financial officer in the federal government, Washington, Sept. 12.

Participated in a panel discussion on accounting and auditing standards at the American Institute of Certified Public Accountants' Governmental Accounting and Auditing Update Conference, Rosslyn, VA, Sept. 23.

John Cherbini, associate director, spoke on managing the cost of government at the National Conference of State Human Services Finance Officers, Atlanta, July 31.

Virginia B. Robinson, associate director:
Spoke to the Institute of Internal Auditors on systems audit methodology, Singapore, July 10.

Was appointed to a 3-year term (1985-1988) as a member of the national executive committee of the Association of Government Accountants.

James L. Kirkman, deputy associate director, spoke on managing the cost of government at the Executive Development Seminar conducted by the Office of Personnel Management at Kings Point, NY, Sept. 24.

General Government Division

Rosslyn S. Kleeman, associate director:
Discussed GAO studies on comparable worth at a seminar sponsored by the federal section of the International Personnel Management Association, Washington, July 10.

Served as a panelist at the Personnel Directors' Conference, where she discussed civil service issues, Washington, Aug. 20.

Served as a panelist for the federal section of the International Personnel Management Association on mid-level managers, Washington, Sept. 5.

Spoke to the Equal Employment Opportunity Small Agency Council on comparable worth, Washington, Sept. 18.

Brian Usilaner, associate director, spoke on " Productivity Management," before a Public Health Service Conference, Washington, Aug. 23.

Charles E. Fritts, group director:
Spoke on "Integrating American Industry Through Manufacturing and Communications Technology" at an industry conference on the need for updating cost accounting principles and practices, Phoenix, July 5.

Spoke on "Defense Procurement: Why It Won't Be Fixed," before the American Defense Preparedness Association, Houston, Aug. 28.

Gillian G. Garcia, group director, and Lawrence D. Cluff and Kevin Yeats, economists, spoke at an executive session of the National Association of State Savings and Loan Supervisors, Washington, July 25.

Ron King, group director:
Participated in the Architectural/Engineering System's Sixth International Information and Automation of Reprographics in Design Conference, Anaheim, CA, June 3-7.

Participated in the 1985 Workshop on Advanced Technology for Building Design and Engineering sponsored by the National Academy of Sciences, Woods Hole, MA, June 16-21.

John A. Leitch, group director, gave a keynote address on "Productivity Management and Analysis" at a Library of Congress conference, Washington, July 7.

Michael Hutner, evaluator, was elected coordinator of the Roundtable on Health and Human Resources, which is affiliated with the National Capital Area Chapter of the American Society for Public Administration, July 1985.

Human Resources Division

Bill Gainer, associate director:
Wrote "Mortgage Revenue Bonds: Their Costs Outweigh Their Benefits to Homebuyers," published in the fall issue of the *Housing Finance Review*.

Spoke on GAO's reviews of the Federal National Mortgage Association and rural housing programs at the National Housing Conference, Washington, Aug. 13. His speech was broadcast nationally over the C-SPAN (Cable Satellite Public Affairs Network) cable channel.

Dan Brier, group director, conducted a workshop on loss analysis and corrective action planning at the annual conference of the National Welfare Fraud Association, Cherry Hill, NJ, Sept. 10.

Bud Patton, group director, and Jack Pichney, Accounting and Financial Management Division, discussed GAO's management review at the Department of Labor during the Labor Department's Financial Managers' Conference, Washington, Aug. 28.

Paul Posner, group director, discussed recent trends in federal-state relations at the annual conference of the National Conference of State Legislatures, Seattle, Aug. 5.

Patricia Cole, evaluator, discussed GAO's review of work and welfare programs for women in the Aid to Families With Dependent Children program before the employment committee of the National Council of State Human Services Administrators, Washington, Sept. 11.

National Security and International Affairs Division

Frank Conahan, director, discussed "The Role of GAO in Public Programs Management" before participants in American University's Washington Semester Program, Sept. 20.

Nancy Kingsbury, associate director, was appointed secretary-treasurer designate of the American Evaluation Association at the first meeting of its board, Washington, June 20.

Allan Mendelowitz, associate director, discussed "GAO's Role in Assisting Congress" before the President and other members of the Brazilian Senate, Washington, July 18.

Clark Adams, group director:
Participated in a panel discussion on the "Defense Financial and Investment Review" before the procurement committee of the National Security Industrial Association, Washington, Aug. 21, 27.

Participated in a panel discussion on "Defense Profitability" before the public contract law section at the American Bar Association's annual meeting, Washington, July 8.

Bill Beusse, group director, discussed "Public Policy and Management" at the annual meeting of the Academy of Management, San Diego, Aug. 13.

Burt Hall, group director, spoke on "Structuring Acquisition Strategies for Competitive Systems Design and Development" at conferences on competitive procurement sponsored by the Technical Marketing Society of America, Washington, Aug. 5, and Boston, Aug. 15.

Bill McNaught, group director, participated in a panel discussion on "Labor Force and Supply Issues" at the Twentieth International Atlantic Economic Conference, Washington, Aug. 29.

Tom O'Connor, group director:
Copresented an "Effective Report Writing" course for the internal audit staff of the city of Austin, TX, Aug. 26-28.

Discussed GAO's "Managerial Leadership" course at Kepner-Tregoe's National Client Conference, Chicago, Sept. 17.

Kevin Tansey, group director,
Discussed the work of GAO's interdivisional task force on the implementation of the Competition in Contracting Act of 1984 before the DOD (Department of Defense) High-Level Working Group on Competition, Washington, Sept. 17. Discussed the above topic at the Conference of Federal Agency Competition Advocates, sponsored by the Office of Federal Procurement Policy, Washington, Aug. 23.

Bill Wright, senior evaluator, provided a briefing on "How GAO Conducts Economy and Efficiency and Program Results Reviews" to Deloitte Haskins & Sells' national and international staffs, Washington, July 16.

Ron Bonfilio, evaluator, spoke on "Cost Accounting Standards Update" before the Department of Labor's cost negotiations annual planning meeting, Washington, Sept. 17.

George Jahnigen, evaluator, participated in a panel discussion, "Can Executive Agencies Successfully Be Held Accountable for Property Under Their Responsibility?" at the 1985 National Property Management Association seminar, Alexandria, VA, Aug. 28.

Program Evaluation and Methodology Division

Eleanor Chelimsky, director, spoke on "Program Evaluation's Role in Achieving Constructive Governmental Change" at the second national conference on energy conservation program evaluation, cosponsored by the Department of Energy and the Argonne National Laboratory, Chicago, Aug. 19.

Wallace M. Cohen, group director, is serving as board member of the management science and policy analysis section of the American Society for Public Administration for 1985-1986.

Cynthia Siegel, social science analyst, presented a paper entitled "Evaluation of the Korean Family-Planning Program: An Application of the Microeconomic Theory of Fertility" at the American Sociological Association's annual meeting, Washington, Aug. 26.

Resources, Community, and Economic Development Division

Osmund Fundingsland, chief science advisor, chaired a panel on "Emerging Developments in National Policy That Affect R&D" at the annual meeting of the National Conference for the Advancement of Research, Keystone, CO, Sept. 29-Oct. 2. He was also elected to the conference committee.

Daniel Semick, evaluator, was named associate editor of *Capital Currents*, the newsletter of the National Capital Area Chapter of the American Society for Public Administration, July 1985.

Bill Shear, economist, coauthored "Discrimination in Urban Housing Finance: An Empirical Study Across Cities," published in *Land Economics*, August 1985.

Deborah Signer and Jane Hunt, writer-editors, and Leo Ganster, evaluator, presented a workshop on writing in the workplace to the faculty of the Prince Georges Community College, Aug. 22

Office of the General Counsel

Harry R. Van Cleve, general counsel:
Spoke on "Bid Protests at GAO Under the Competition in Contracting Act" at a joint meeting of the American Bar Association, the Federal Bar Association (FBA), and the District of Columbia Bar, Washington, Aug. 13.

Discussed "What One Office Did To Meet A New Demand on It" before the Honolulu-Pacific Federal Executive Board, Honolulu, Sept. 17.

Spoke on "Bid Protests at GAO Under the Competition in Contracting Act (CICA)" and participated in a panel discussion on "Issues in Federal Procurement and Property Management" at the Pacific Emerging Issues Conference sponsored by the Hawaii Chapter of the Association of Government Accountants, Honolulu, Sept. 18-19.

James F. Hinchman, deputy general counsel, discussed GAO's role and purpose with participants in the Corporate Executive Development Program, U.S. Chamber of Commerce, Washington, Sept. 23.

Seymour Efros, associate general counsel, spoke before the North Alabama Chapter of the FBA on "The Funny Thing That Has Happened Since CICA: GAO Bid Protests," Huntsville, AL, Nov. 7.

Office of International Audit Organization Liaison

Elaine L. Orr, director, was appointed chair of the graduate merit scholarship committee of American University's College of Public and International Affairs, November 1985.

Carol Codori, director of the International Auditor Fellowship Program, was appointed historian for the Senate Employees' Child Care Center, Washington, Sept. 1. Her role involves documenting the development of the Center as a model work-site facility.

Alberta Tropf, program deputy of the International Auditor Fellowship Program, is serving as executive director of the National Capital Area Chapter of the American Society for Public Administration, Washington, 1985-86.

Joint Financial Management Improvement Program

Doris A. Chew, assistant executive director:
Is chairperson of the awards committee for the Association of Government Accountants, Washington Chapter, 1985-86.

Was elected director of programs, Association of Government Accountants, Montgomery-Prince Georges Chapter, 1985-86.

Office of Organization and Human Development

Frank T. Davis, outplacement specialist, conducted career development workshops for the International Personnel Management Association, Baltimore, July 1-3; Federally Employed Women's Conference, Detroit, July 18-19; Blacks in Government, Washington, Aug. 15-18; and National Association of Blacks Within Government, Philadelphia, Sept. 19.

Ellen K. Harvey, counseling psychologist, spoke on "Myers-Briggs Type Inventory and Leadership Style" at the National Conference of State Legislators, Scottsdale, AZ, Sept. 19.

Linda Bidlack, counseling psychologist intern, chaired a conference on "The Business/Industry/Government Link: Putting Your Counseling Skills to Work" for the Counseling and Personnel Services Department of the University of Maryland, fall 1985.

Personnel

Felix R. Brandon II, director, participated in the fall meeting of the governmental relations committee of the American Assembly of Collegiate Schools of Business, Boston, Sept. 15-16.

Stephen J. Kenealy, national recruitment program manager:
Delivered a presentation on "Recruiter Training" at the annual conference of the Southern College Placement Association, Williamsburg, VA, July 23-25.

Was selected as a member of the ethics committee of the Southwest College Placement Association, Sept. 12.

Dinah R. Griggsby, college relations officer:
Was appointed to a task force charged with evaluating career planning and placement programs at state-supported colleges and universities by the Virginia State Council of Higher Education, Sept. 5.

Was appointed to the National Urban League's Black Executive Exchange Program, a voluntary effort of industry and government agencies who agree to loan designated key black executives and professionals to participating colleges, where they give lectures in appropriate credit-bearing courses, Sept. 24.

Is serving on the George Mason University Advisory Board, which provides a forum for the exchange of ideas for improving employer/college relations and the career, co-op, and placement programs, for the academic year 1985-86.

Regional Offices

Boston

Morton A. Myers, regional manager, has accepted a second 3-year appointment to the School of Management's Professional Accountancy Advisory Council, Suffolk University, Boston.

Jennifer Arns, technical information specialist, conducted a "poster session" entitled "Literature on Environmental Issues" at the 104th annual conference of the American Library Association, Chicago, July 6. The session was intended to assist small public and organizational libraries in developing special environmental-issue collections to meet their patrons' research needs.

Chicago

John A. Rose, evaluator, discussed GAO operations as a member of a professional panel, Northern Illinois University, DeKalb, Oct. 10.

Denver

Pam Tumler, writer-editor, conducted workshops on "Understanding the Writing Process: Planning, Drafting, and Revising" at a skills development seminar for legislative staff, sponsored by the National Conference of State Legislatures, Boulder, CO, July 9-10.

Detroit

Chester Sipsock, evaluator, was appointed chairman of the Association of Government Accountants' chapter recognition committee for 1985-86.

Kansas City

Larry Van Sickle, assistant staff manager/training coordinator, taught a course on "Principles of Supervision," Longview Community College, Lee's Summit, MO, fall 1985.

Mark F. Baggio, evaluator, passed the Nebraska bar exam, Oct. 4.

Los Angeles

Vic Ell, assistant regional manager:
Spoke before the Pacific Emerging Issues Conference on "A Case Study in Improving Efficiency in Local Government," Honolulu, July 8.

Spoke on GAO's work before California State University's Beta Alpha Psi accounting fraternity, Los Angeles, July 26.

Fred Gallegos, manager, management science group:
Participated in the first meeting of the Electronic Data Processing Auditors Association, Dallas, Aug. 8-9.

Coauthored an article with William E. Perry, president of the Quality Assurance Institute, entitled "The Auditor, EDP, and the Federal Government," published by Auerback Publishers for their EDP Audit Series, June 1985.

Coauthored an article with Rod Kocot, senior EDP auditor, Security Pacific Corp., entitled "Auditing Operating Systems," published by Auerback Publishers for the EDP Audit Series, August 1985.

Philadelphia

Richard Halter and David Pasquarello, evaluators, conducted a workshop on loss analyses and corrective action planning at the annual conference of the National Welfare Fraud Association, Cherry Hill, NJ, Sept. 10.

San Francisco

Thomas P. McCormick, regional manager, and Jim Mansheim, assistant regional manager, participated in the combined Western Intergovernmental Audit Forum and Pacific Emerging Issues Conference, Honolulu, Sept. 16-19.

Jim Mansheim discussed current issues in financial management at a meeting of the East Bay Chapter of the Society of California Accountants, Oakland, Sept. 28.

Bob MacLafferty, senior evaluator, discussed GAO's report on letter carriers' workload and overtime concerns at the Irvington, CA, Post Office Station before local members of the National Association of Letter Carriers, El Cerrito, CA, Sept. 24.

Gerry Vroomman, computer systems analyst, taught a 1-day course on microcomputers and auditing for city, county, and state auditors, San Francisco, Sept. 20. The course was sponsored by the California Association of Auditors for management.

Seattle

Stephen J. Jue, technical assistance group manager:
Was elected 1985-86 Certified Information Systems Auditor Review Program chairman, Puget Sound Chapter, EDP Auditors Association, Seattle, September 1985.

Spoke at the first annual conference of the Hawaii Information Processing Council on "ADP Auditing: The IMTEC Approach," and, along with **Ralph R. Hovda, Denver,** and **Joseph P. Martorelli, San Francisco,** spoke on "GAO's Evaluation of Lapsize Microcomputers." Mr. Jue served as national project leader on the latter project, Wailea, Maui, Hawaii, Sept. 23 and 25.

R. Jerry Aiken, technical assistance group evaluator, was elected 1985-86 program chairman, Puget Sound Chapter, EDP Auditors Association, Seattle, September 1985.

Steven N. Calvo, evaluator, and Ron Stouffer, Resources, Community, and Economic Development Division, discussed GAO's review of the Department of Energy's implementation of the Nuclear Waste Policy Act of 1982 at the annual meeting of the National Association of Regulatory Utility Commissioners, San Francisco, July 29.

Stanley G. Stenersen, writer-editor, presented a workshop on "Managing the Writing Process" for representatives of about 20 state audit and evaluation agencies at the annual meeting of the National Conference of State Legislatures, Seattle, Aug. 5.

Annual Awards for Articles Published in *The GAO Review*

Cash awards of $500 each are presented each year for the best two articles written by GAO staff and published originally in *The GAO Review.* Staff through grade GS-15 at the time they submit the article are eligible for these awards. A noncash award is available for best article by a member of the Senior Executive Service or candidate pool. The awards are presented during the GAO Awards Program held annually in Washington, D.C.

The awards are based on recommendations of a panel of judges that is independent of *The GAO Review* staff. The panel of judges is chaired by the Director, Office of Policy (OP), who, together with a representative of the Public Information Office, serves as a permanent panel member. Two other SES-level panel members will be selected for a 1-year term by the Director, OP. These selections will be made from among the members of GAO's office-wide awards committee. The judges evaluate articles from the standpoint of their overall excellence, with particular concern for the following:

- Originality of concepts and ideas. (The author demonstrated imagination and innovation in selecting and developing a topic.)
- Degree of interest to readers. (The article, by virture of the topic and its treatment or its relevance to GAO's mission, was of special interest to GAO staff.)
- Quality and effectiveness of written expression. (The article was well organized and written in polished prose.)
- Evidence of individual effort expended.

Statement of Editorial Policy

This publication is prepared primarily for use by the staff of the General Accounting Office (GAO) and outside readers interested in GAO's work. Except where otherwise indicated, the articles and other submissions generally express the views of the authors and not an official position of GAO.

The GAO Review's mission is threefold. First, it highlights GAO's work from the perspectives of subject area and methodology. (The *Review* usually publishes articles on subjects generated from GAO audit work that are inherently interesting or controversial. It also may select articles related to innovative audit techniques.) Second, and equally important, the *Review* provides GAO staff with a creative outlet for professional enhancement. Third, it acts as historian for significant audit trends, GAO events, and staff activities.

Potential authors and interested readers should refer to GAO Order 1551.1 for details on *Review* policies, procedures, and formats.

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