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THE EMANUEL SAXE DISTINQUISHED LECTURE

BY ELMER B. STAATS
COMPTROLLER GENERAL OF THE UNITED STATES

AT THE BARUCH COLLEGE
OF THE CITY UNIVERSITY OF
NEW YORK

MAKING ACCOUNTING SERVE GOVERNMENT BETTER -- A CHALLENGE TO THE ACCOUNTING PROFESSION

DECEMBER 10, 1979

I am honored to have been invited to deliver a lecture sponsored by one of America's leading schools of accounting and honoring one of the profession's leading theoreticians and teachers--Dean Emanuel Saxe.

Today accountants and the accounting profession are challenged on many fronts. If we do not develop solutions to what is widely perceived as unmet needs, others will impose their solutions on the profession. Illustrative of this concern was recent action by the Congress in passage of the Foreign Corrupt Practices Act, imposing recordkeeping and internal control standards on Securities and Exchange Commission registrants. Let me begin my remarks this evening by offering some background on some of the current and emerging problems facing the accounting profession - at least as I perceive them.

As Comptroller General of the United States for nearly 14 years, I have been responsible for establishing the accounting and financial reporting principles and procedures for the Federal Government. My term of office ends in early 1981. I've spent

most of my professional life in the Federal service; the Government's problems are what I know best. It is on this basis that I share with you some of GAO's accomplishments and some of its current projects.

The staff of the General Accounting Office, which I head, does all it can to identify ways to improve Federal accounting and financial reporting. We work hard at this because we are sure that the Government can use its accounting systems more effectively and more efficiently. Of course there are also other key problems--especially the two-point challenge. Although my comments focus on the Federal Government, the unresolved accounting and financial reporting issues I see at the Federal level many apply also to government at State and local levels and to private industry.

The two questions challenging professional accountants in the Federal Government are as follows:

--How can accountants help managers use financial data in their decisionmaking? Accountants must give managers estimates of the financial consequences of alternative actions being considered in any program. This would let managers select the most economical use of public resources to achieve a program's goal. And,

--How can accountants help managers develop better internal control procedures, using advanced computer technology, to detect misuse, waste, and theft of public resources?

These, then, are two major challenges. Where did they originate? How can we meet them?

Unabating inflation that generates continual rising costs and recent revelations of the misuse, of Government and corporate resources have focused attention on the need for better accounting and accountabilty in both Government and industry.

Government at all levels is under pressure from taxpayers to hold the line on costs and produce more at the same or lower cost. The public's response to California's Proposition 13 and to similar propositions on ballots in other States is that Government programs are needed and should be continued, but that Government is inefficient or wasteful and can and should accomplish program goals for less money and stop the waste.

These demands have been heard from Captiol Hill to the White House and Federal managers are turning more and more to their accountants and accounting systems for information and help in answering them.

We in the General Accounting Office are working closely with these managers and accountants to improve agency accounting systems and the financial information developed. This is the road to better managerial decisionmaking and control of public funds and other resources and assets. Government accountants, financial executives, and managers also need the help and support of their colleagues in the private sector. If we work together, the solutions we develop to solve the Government's accounting and accountability problems may also help

solve similar problems facing many private profit and non-profit organizations.

At the start, the accounting profession should develop and implement a research and development program. Such a program, particularly from the Federal perspective, should include five steps:

First, the types of financial information and analyses accountants and accounting systems give managers should be reevaluated. This should focus on how historical financial information can be used prospectively; that is, how historical financial information can be a basis for predicting financial consequences of alternative actions.

Second, ways should be devised so that accountants and accounting systems can take advantage of modern computer capability to enhance controls over an organization's resources and increase the probability of routinely disclosing fraud and abuse.

Third, an education program should be undertaken to break down negative attitudes among managers, accountants, and computer professionals. These attitudes currently preclude managers, accountants, and computer professionals from collaborating as full-fledged members of an agency's management team.

Fourth, reports sent to individuals outside a governmental or business entity should be reevaluated to determine ways to make these reports more meaningful.

Fifth, a careful study should be made of the complex problems of assigning dollar values to the Government's products and services so these values can be compared with what they cost the Government as a basis for deciding which programs to keep, which ones to abandon, and which ones to start.

It is time likewise for Federal managers and accountants to study how the accountant's role in industry has changed, and to learn from industry how accountants can contribute effectively to improved management of U.S. Government programs. In Federal agencies, accountants historically have been viewed as financial scorekeepers with primarily a retrospective view of events.

Now, however the computer and related advances in automated information processing and analysis techniques give the accountant the opportunity and the tools to actively participate in decision-making. Federal accountants have the opportunity--and the responsibility--of showing managers how to use historical financial information to help predict financial consequences of alternative actions being considered.

Accountants can and should be able to help managers answer such basic questions as:

--Did we produce required products and/or services at the least practicable costs?

--If not, how can we change our operations to produce more for each dollar spent?

Such questions can be answered by a host of analytical techniques developed under the umbrella term of cost/benefit analysis. These cost/benefit analysis techniques include:

--Analyses of cost trends.

--Comparisons of estimated versus actual costs.

--Comparisons of projected work units tied to anticipated costs and actual completed work units tied to actual costs.

--Comparisons of the costs incurred by different organizational units performing similar tasks to help identify efficient and economic operating units.

--Cost analyses tied to work performance standards to better measure program performance.

--Comparisons of costs and benefits of alternative methods of delivering public services.

In the Federal financial community we have not kept pace with our colleagues in the private sector in integrating financial considerations into managerial decisionmaking. This lag has not been without cause. Decisions made by managers in private industry lend themselves to relatively straightforward cost/benefit analyses. Here is an example.

In deciding whether to purchase a new, more efficient machine tool, one must relate the cost of the machine to the extra profit anticipated because the new machine can produce

more in a given period than the current machine. In contrast, almost all Federal programs involve such issues as improving the quality of life of Americans, providing suitable housing for all citizens, or providing for the Nation's defense. It is extremely difficult, for example, to reduce to financial terms the value of extending the average life span of Americans by one year and matching this value against the cost of a health research program needed to achieve this goal. In short, the program manager is asked to put a price tag on a year of a person's life.

Quantifying costs and benefits for Federal programs are problems that we must solve to help Federal managers make--from a financial standpoint--better decisions. In my opinion, this is the area where accountants can contribute most usefully toward cutting costs and increasing productivity. Managers in Government and industry are the stewards of our Nation's resources. If we, in the financial and accounting communities, help managers make better decisions by informing them of the future financial impacts of alternative actions then we will help Government and industry produce more for less.

In the General Accounting Office we have been working to integrate financial considerations into Federal decision-making at two levels; that is, on a Government-wide level and on an individual agency level.

On the Government-wide level, the General Accounting Office is working with the Treasury to develop consolidated financial statements for the Federal Government. This was started in 1976 by former Treasury Secretary William Simon. To do this, Secretary Simon set up two advisory committees--an External Advisory Committee and an Internal Advisory Committee.

The External Advisory Committee has finished its work; I was a member; it included accountants, economists, and business people who dealt with conceptual issues such as whether the Federal Government should establish a pension liability on its consolidated statements or what values the Government should give its assets.

The Internal Advisory Committee, which I chair, is comprised of high level Federal financial executives. We are developing ways to implement the External Advisory Committee's recommendations on the accounting and financial reporting concepts the Government should follow to develop meaningful, comprehensive financial statements.

This combined GAO/Treasury effort is an attempt to present the Government's financial condition, results of operations, and future financial commitments and resources in plain language, using understandable formats. These statements, when developed more fully, should help the Congress and citizens assess the overall financial condition of the Government and select future

financial goals and programs. The Treasury hopes to have business-type financial statements for the Government ready by the early 1980s.

As I mentioned earlier, the General Accounting Office helps individual agencies to develop and use effective accounting and financial reporting systems. In May, we published a booklet to highlight GAO's experiences and lessons learned over many years of working with Federal agencies and others in enhancing accounting and accountability in the Federal Establishment. It is titled "Managers, Your Accounting System Can Do A Lot For You."

We hope that Federal managers will adopt effective techniques presented in the booklet and avoid the financial management mistakes illustrated.

Naturally this booklet has its roots in GAO's experiences in reviewing operations of agency accounting systems, in experiences of accountants and agency managers in working daily with the information produced by their accounting systems, and in experiences of accountants and management consultants who work with Federal agencies in designing and using accounting systems.

GAO, too, learned something from its work on the booklet: that we in the Federal Government have important attitudinal problems to overcome before we effect the full integration

of financial information in managerial decisionmaking. We found that:

--Many Federal managers believe that accounting and accountants have primarily a retrospective view of events; that is, they are financial scorekeepers of past results of decisions rather than predictors of the financial consequences of pending decisions.

--Accountants see managers as indifferent to the ways financial information can be used in managerial decisionmaking.

--Computer professionals--who have the tools to integrate accounting systems and information into the managerial process--view both accountants and managers as aloof from the computer field.

When managers, accountants and computer professionals, do not work together as a team, the quality of managerial decisions--in financial terms--diminishes.

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--Some written explanations for cost transfers did not include enough information for a reader to evaluate why the transfers were purported to be made.

--All cost transfer explanations were not reviewed by accountants to determine if the transfers were proper and warranted approval. (Accountants could have detected and prevented some of the improper ones.)

--Internal audit reports disclosing that improper cost transfers between orders were ignored by agency managers and executives.

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Another case study highlights how managers in an agency used financial and quantitative information produced by the agency's accounting system to assign people to the most productive tasks. The agency, a bureau in a city government, collects taxes from individuals, corporations, and other businesses. To assure that taxes are properly collected, the city relies on voluntary compliance with tax laws, backed up by audits of selected returns.

But the agency's audit staff is small. Only a fraction of the large number of each year's tax returns can be audited. In selecting returns for audit, managers devised a system,

using information in the agency's accounting records, so audits would yield the maximum amount of additional revenue.

The tax return selection system works this way.

--The agency selected a representative period of time as a base period. Base period productivity indexes were computed for each type of return by dividing the number of audits by the number of staffhours spent. Indexes for subsequent periods were computed the same way and were plotted on a graph for each type of audit.

--The agency computed a ratio for each type of return showing the additional taxes resulting from each audit dollar spent. This information was plotted on a graph to show where audits were producing the most additional tax revenues.

--The two graphs were analyzed to establish the combination of audits, by type of tax return, that would yield the maximum additional revenue.

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higher revenue producing audits, limiting the low payoff areas to the minimum to sustain voluntary taxpayer compliance.

Where managers, accountants, and computer professionals do work as a team, an accounting system can be both a predictor as well as an historical record.

The money and other resources given Federal managers, or managers in a private corporation, are a trust from the owners of those funds and resources. Therefore, managers are accountable for seeing that those funds and resources are used only for authorized purposes and are not misused, wasted, lost, or stolen.

Accounting systems can and must be the first line of defense against fraud and misuse, abuse and waste of resources.

Recent revelations of the misuse of Government and corporate resources and of fraud and abuse in both the public and private sectors--the General Services Administration and Equity Funding scandals just to mention a few--have led the general and investing public to feel the accounting profession was negligent. White collar, and particularly computer related crimes, increasingly make the headlines.

The accounting profession must act now to explore ways to use the computer to assist managers in strengthening internal controls over funds and other resources and to develop advanced audit techniques to detect fraud and abuse. Some techniques the profession should evaluate include:

--Improved access controls to computer based accounting systems--especially those systems based on the wire transmission of information.

--Sophisticated computer edit checks of information entered into the computer for processing to reject from further processing, and report to managers all questionable transactions.

--Automatic sampling of transactions for audit while transactions are being processed through the automated accounting system.

--Incorporation of audit features in large computer systems to help auditors and managers determine exactly how computers process information--like an integrated test facility which allows one to process test transactions through the computer along with normal transactions.

Current state-of-the-art in the computer sciences offers the accounting profession the opportunity, tools, and techniques to augment accounting and internal controls of an organization's resources and provide for the detection and prevention of fraud and the misuse and abuse of resources.

The General Accounting Office's current research and development efforts in accounting and financial reporting to deal with fraud and misuse or abuse of resources, include two thrusts: improved computer based auditing techniques and enhanced controls for computer based accounting systems.

To improve computer based auditing techniques, the General Accounting Office developed several audit guides to help its professional staff evaluate the adequacy of controls in agency automated accounting systems. These audit guides were distributed to Federal agencies and many organizations outside Government. They include:

--A guide to help our professional staff assess the adequacy of internal controls in automated systems and the degree of reliability of information in agency computer produced reports. The results of these assessments are used in scoping further audit work.

--A guide on developing sets of test transactions to determine how an accounting system's computer programs will handle correct and incorrect transaction information. This audit guide was devised primarily for reviews of automated payroll systems, but the basic principles are applicable to creating sets of test transactions for any automated financial or administrative system.

We also are drafting a review guide for completing computer performance evaluations of agency computer systems. This guide will help our professional staff, with the assistance of expert consultants, to measure how efficiently the equipment resources in an agency computer system are used. Methodologies in this guide include using complex hardware and software monitors to measure how much of the practical

capacity of a given computer configuration is used for productive work.

When computer specialists, accountants, and auditors work as a team, the best results are achieved. Each professional contibutes the expertise of a specialty, and the combination of accounting and computer science equals a most effective evaluation.

On a recent review of the automated accounting system supporting a large Federal program, General Accounting Office auditors and computer specialists collaborated in evaluating system operations. Our work resulted in the agency improving controls over cash receipts and reducing computer costs by restructuring the automated master files. We could not have helped the agency improve controls over cash receipts and reduce computer operating costs if auditors and computer specialists had not cooperated in the review.

The same cooperation between accounting and computer science professionals in designing an accounting system can produce a system with superior accounting and internal controls over an organization's resources. At one Federal agency accountants and computer professionals together planned and implemented an accounting system with superior controls over accounts receivable. The system is run so it:

--Records amounts due and paid, promptly and accurately.

--Generates timely invoices to customers when services are rendered.

--Produces followup letters at 30-day intervals when invoices are overdue.

--Refers accounts over 180 days overdue to the legal department.

--Charges customers 12 percent per annum interest on all invoices not paid within 30 days of the billing date.

The agency's accounts receivable system helps managers collect amounts due the Government in full and on time. For example:

--95 percent of all bills were paid within 30 days of the invoice date.

--Followup on overdue accounts is highly effective; in a recent fiscal year, the agency wrote off only one account--of $5,000.

--$724,000 in interest on overdue invoices was levied and collected by one of the agency's field units in a recent fiscal year.

Recently, the General Accounting Office cooperated with a major Federal Department to design and implement an integrated test facility in an automated accounting system for a massive Federal income security program. An integated test facitity in an automated system consists essentially of setting up a segregated portion of the system's masterfile for auditor's "dummy" or test master records. Once we established the test

master records, our auditors and the agency's staff could mix test transactions with normal transactions to see how the system would react to correct and incorrect transaction information. Since the agency's system was based on wire transfer of information from field offices to a central computer facility, the integrated test facility allowed our auditors to enter test transactions via remote computer terminals to test controls built into the agency's communications network.

We, in the General Accounting Office, feel our work to date has only scratched the surface. We have a long way to go before all Federal agencies have accounting systems that are effective first lines of defense against fraud and misuse and abuse of resources. We also have a long way to go before we learn how to effectively use the computer to build first-rate controls into agency financial and administrative systems.

The accounting profession has been challenged to modernize its services to its clients and to the general public. The profession needs to begin a research and development program--as I outlined earlier--to update the kinds of information accountants and accounting systems produce.

Accountants in the Federal Government need the help and support of their professional colleagues in the private sector to solve the many accounting and financial reporting problems

that challenge us. The accounting and accountability problems that face Government may also apply to some degree to profit and nonprofit organizations in the private sector. If we do not work together these problems are not likely to be solved; if we do work together the performances of Government departments and agencies will greatly improve.

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--A guide to help our professional staff assess the adequacy of internal controls in automated systems and the degree of reliability of information in agency computer produced reports. The results of these assessments are used in scoping further audit work.

--A guide on developing sets of test transactions to determine how an accounting system's computer programs will handle correct and incorrect transaction information. This audit guide was devised primarily for reviews of automated payroll systems, but the basic principles are applicable to creating sets of test transactions for any automated financial or administrative system.

We also are drafting a review guide for completing computer performance evaluations of agency computer systems. This guide will help our professional staff, with the assistance of expert consultants, to measure how efficiently the equipment resources in an agency computer system are used. Methodologies in this guide include using complex hardware and software monitors to measure how much of the practical

capacity of a given computer configuration is used for productive work.

When computer specialists, accountants, and auditors work as a team, the best results are achieved. Each professional contibutes the expertise of a specialty, and the combination of accounting and computer science equals a most effective evaluation.

On a recent review of the automated accounting system supporting a large Federal program, General Accounting Office auditors and computer specialists collaborated in evaluating system operations. Our work resulted in the agency improving controls over cash receipts and reducing computer costs by restructuring the automated master files. We could not have helped the agency improve controls over cash receipts and reduce computer operating costs if auditors and computer specialists had not cooperated in the review.

The same cooperation between accounting and computer science professionals in designing an accounting system can produce a system with superior accounting and internal controls over an organization's resources. At one Federal agency accountants and computer professionals together planned and implemented an accounting system with superior controls over accounts receivable. The system is run so it:

--Records amounts due and paid, promptly and accurately.

--Generates timely invoices to customers when services are rendered.

--Produces followup letters at 30-day intervals when invoices are overdue.

--Refers accounts over 180 days overdue to the legal department.

--Charges customers 12 percent per annum interest on all invoices not paid within 30 days of the billing date.

The agency's accounts receivable system helps managers collect amounts due the Government in full and on time. For example:

--95 percent of all bills were paid within 30 days of the invoice date.

--Followup on overdue accounts is highly effective; in a recent fiscal year, the agency wrote off only one account--of $5,000.

--$724,000 in interest on overdue invoices was levied and collected by one of the agency's field units in a recent fiscal year.

Recently, the General Accounting Office cooperated with a major Federal Department to design and implement an integrated test facility in an automated accounting system for a massive Federal income security program. An integated test facitity in an automated system consists essentially of setting up a segregated portion of the system's masterfile for auditor's "dummy" or test master records. Once we established the test

master records, our auditors and the agency's staff could mix test transactions with normal transactions to see how the system would react to correct and incorrect transaction information. Since the agency's system was based on wire transfer of information from field offices to a central computer facility, the integrated test facility allowed our auditors to enter test transactions via remote computer terminals to test controls built into the agency's communications network.

We, in the General Accounting Office, feel our work to date has only scratched the surface. We have a long way to go before all Federal agencies have accounting systems that are effective first lines of defense against fraud and misuse and abuse of resources. We also have a long way to go before we learn how to effectively use the computer to build first-rate controls into agency financial and administrative systems.

The accounting profession has been challenged to modernize its services to its clients and to the general public. The profession needs to begin a research and development program--as I outlined earlier--to update the kinds of information accountants and accounting systems produce.

Accountants in the Federal Government need the help and support of their professional colleagues in the private sector to solve the many accounting and financial reporting problems