

# **Public Digest Fund - Curbing Fraud and Corruption in Government**

**Volume VIII, NO. 2, 1997**

**Forward**

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In this edition of the Public Fund Digest, we continue our tradition of bringing you a compilation of brief papers on the topical issues of the day. We have learned from our annual conferences in Miami, Florida, and Washington, D.C., as well as from our monthly forums in Washington, that Consortium participants continue to have a strong interest in accountability, disclosure, the many faces of auditing, fraud and corruption. The lead article in this issue is "The Government Auditor's Role in Investigating Fraud: The U.S. General Accounting Office Experience" by Donald J. Wheeler. While the title of this article has a traditional ring to it, the manner in which it interrelates the role of the auditor and the investigator is forward-looking and instructive.

As an international umbrella organization, we search for provocative and inspiring papers developed by authors who seek to influence public opinion on accountability auditing, financial management and other aspects of good government in democratic societies. We hope you will be stimulated by our current issue and will pass it on to your colleagues. Please also let us know your views on the topics covered; letters to the editor are always welcome.

In addition to the continuing emphasis on fraud, we also focus on other topics that still need attention in every country where we have established contacts. So it is that this issue includes articles on accountability, financial management systems, cost and accrual-based accounting, budgetary accounting and performance measurement. Our concluding article - a special research treatise - "The Balanced Budget and Interperiod Equity" - offers some stimulating insights on our responsibilities as citizens as well as financial managers.

Letters to the editor and articles for future publications should be addressed to Virginia B. Robinson at the Consortium address. You are also encouraged to join us for additional discussions at the Washington Forums, luncheon meetings held on the first Wednesday of each month. And for the ultimate three-day information exchange on international financial management topics, meet us in Miami each April and in Washington, D.C., each October. Contact us by telephone, facsimile or the Internet at the Consortium address.

## **The Government Auditor's Role in Investigating Fraud: The US General Accounting Office Experience**

**Donald J. Wheeler, Acting Director, Office of Special Investigations, US General Accounting Office**

### **Introduction**

In the United States, Medicare, which provides health care for the elderly and the disabled, costs the U.S. taxpayer \$197 billion in fiscal year 1996. It is estimated that from \$6 billion to \$20 billion—some 3 to 10 percent of total program costs—could have resulted from fraudulent and abusive claims. This is not the only example I could cite, and I know that many of you in the audience could tell similar stories, for fraud and corruption in government agencies and programs is a global issue of great concern to national governments and their audit institutions.

Several international studies have documented the disastrous effects that fraud has on government programs and international trade. Fraud and corruption increase costs, distort public expenditures, and deter

foreign investment. They reduce the efficiency and effectiveness of government operations and erode citizen confidence in public institutions, elected leaders, and career government employees. Consequently, audit organizations worldwide are now wrestling with what the role of the government auditor should be in deterring and uncovering fraud and corruption. Because concern over the phenomenon is so widespread, international organizations such as this consortium, the International Organization of Supreme Audit Institutions, and others have made preventing and detecting fraud and corruption in government a major item for review.

Today, I am very pleased to discuss the role of the auditor in investigating fraud, how the General Accounting Office's (GAO) Government Auditing Standards define that role, and our experiences at the GAO in addressing these very important issues. In particular, I want to describe what has evolved over the years into a comprehensive approach to addressing fraud, waste, abuse, and mismanagement issues. Finally, I will discuss three cases that illustrate the results of this approach.

## The Government Auditor's Role in Investigating Fraud

The auditor's role in investigating fraud encompasses both an awareness of and a consequent search for fraud indicators during the course of an audit. Auditors also play a critical role in contributing to prevention through financial statement and performance audits. These audits strengthen financial management systems by evaluating internal controls to identify and correct weaknesses and by providing timely reports and recommendations to agencies, oversight bodies, and the public.

## Government Auditing Standards Establish Responsibilities and Define Roles

From the outset, GAO's Government Auditing Standards, familiarly known as the Yellow Book,<sup>1</sup> have gone further than traditional audit standards. That is, the Yellow Book standards have emphasized (1) assessing compliance with statutes and regulations relevant to an audit and (2) reporting significant irregularities and illegal acts to appropriate authorities if the audited entity fails to immediately do so. The Yellow Book standards are expressed in broad statements that describe the auditor's responsibilities regarding irregularities, illegal acts, and other noncompliance. These broad statements of responsibility define the auditor's role as one of:

designing the audit to provide reasonable assurance of detecting material irregularities and illegal acts;

expanding audit steps when evidence of irregularities or illegal acts exists, to determine if such acts occurred and whether they are material to financial statement or audit results;

exercising due professional care so as not to interfere with future investigations or legal proceedings; and

reporting irregularities/illegal acts outside of the audited entity as required by law, regulations, and standards.

## Government Auditors Play a Critical Role in Contributing to Prevention

While fraud prevention is not the primary responsibility of the government auditor, the auditor can contribute to prevention by strengthening financial management systems and identifying internal control weaknesses. A strong financial management system limits opportunities for fraud and corruption by providing ongoing accountability through timely reporting of complete and accurate financial information. Such reporting also serves as a basis for effective performance measurement. Another essential component of a strong financial management system is a reliable system of internal controls; historically, effective internal controls have been the main line of defense against fraud and other serious irregularities. Recommendations to strengthen

internal controls and follow-up to assure that corrective actions have been taken contribute to prevention by limiting the vulnerability of government programs to fraud and mismanagement.

Timely reporting of audit findings to oversight bodies, such as the legislature; government agencies; and the public provides for transparency in government operations. In addition to facilitating oversight of government programs and allowing agencies to take corrective actions, public reporting of audit findings and, as appropriate, related investigative results and judicial actions stimulates accountability by those who manage or receive government funds. Public reporting also acts as a deterrent by communicating the efforts given to uncovering misconduct, the consequences for those found to engage in such activity, and the corrective actions designed to prevent future occurrences.

## The GAO Experience

Through a variety of initiatives over the years, GAO has sought to strengthen and intensify its efforts to address fraud, waste, abuse, and mismanagement in government agencies and programs. These efforts have ranged from those that affect the entire organization to specific initiatives intended to address a particular need. They include strategic planning that identifies exposing fraud as a major objective, focusing on high risk programs that are particularly vulnerable to fraud and abuse, improving auditors' awareness of fraud and its indicators, using a fraud hotline, and establishing an in-house oversight investigation capability to address specific allegations of criminal misconduct and serious abuse.

## Strategic Plan

In 1995, GAO developed a strategic plan that established priorities throughout the organization and cut across institutional and agency boundaries. The plan is intended to guide GAO's work over a three-year period. Concerned that stolen and wasted federal dollars have reached an intolerable level, GAO made exposing fraud, waste, abuse, and mismanagement in government programs the second of five major strategic plan objectives. By identifying fraud issues as a major strategic plan objective, GAO leadership has clearly communicated the priority that it gives to identifying and eliminating fraud in government programs to its staff members, the U.S. Congress and the general public.

## The High-Risk Program

In 1990, in the aftermath of scandals at the Departments of Defense and Housing and Urban Development, GAO reviewed and reported on federal program areas that it had identified as high risk because of vulnerabilities to waste, fraud, abuse, and mismanagement. It used indicators such as inadequate internal controls, a history of program abuse, and poor management oversight by program officials to identify and then monitor the high-risk areas.

As part of this "High-Risk Series," first published in 1992, GAO has made hundreds of recommendations to get at the heart of these problems, which are invariably caused by a fundamental lack of accountability and weak internal controls. At present, the major priorities of GAO's high-risk programs are (1) providing accountability and cost-effective management of defense programs; (2) ensuring that all revenues are collected and accounted for; (3) obtaining an adequate return on multibillion-dollar investments in information technology; (4) controlling fraud, waste, and abuse in benefits programs; (5) minimizing loan program losses; and (6) improving management of federal contracts at civilian agencies.

Through its high-risk program, GAO has cast light on areas where major improvements in internal controls and program management are needed. In many instances, high-risk designation has prompted agencies to take corrective actions in their programs. For example, the Department of Education reduced losses in its guaranteed student loan program by over a billion dollars between 1991 and 1995. It did so by requiring lenders and guaranty agencies to share more of the risk of default, more closely monitoring school performance in administering the program, and improving management practices and information systems.

## Fraud Awareness Training

Since the late 1980s, GAO's Training Institute has offered courses in basic and advanced fraud awareness. These courses are intended to raise the auditors' understanding of fraud issues and enhance their skills in identifying indicators of fraud. Additionally, they reinforce to the audit staff GAO's priority and commitment to exposing fraud through the audit process and provide specific guidance on the appropriate actions to take when indicators of fraud are found.

## Hotline/FraudNET

In 1970, GAO initiated the first fraud hotline in the federal government. The GAO Fraud Hotline, now called FraudNET because it is accessible through GAO's home page on the Internet, is an integral part of GAO's effort to uncover fraud. Through the hotline, GAO has provided a mechanism for government employees and the public to anonymously report specific allegations of fraud and corruption in government programs.

### In-House Fraud Investigation Capability

In 1986, a GAO task force recommended that a separate group composed of trained criminal investigators with specialized backgrounds be established within GAO to conduct investigations into fraud, waste, and abuse. As a result, the Office of Special Investigations (OSI) was created to enhance the investigative work that GAO conducts for the Congress. OSI investigates specific allegations involving conflict-of-interest and ethics matters, contract and procurement irregularities, official misconduct and abuse, and fraud in federal government programs or activities.

In 1990, a GAO management initiative sought to more effectively integrate GAO's audit, evaluative, and investigative work in finding and reporting fraud, waste, and abuse in federal programs. Under this initiative, GAO auditors and investigators work together to identify program weaknesses, investigate case-specific examples of program abuse, and produce reports that illustrate program deficiencies and support the need for change. Such interaction between auditors, evaluators, and investigators improves the completeness of GAO's findings and the effectiveness of its reports to Congress and the American people.

OSI's own strategic plan emphasizes its partnership with GAO's auditors to enhance GAO's overall capability to expose and reduce fraud in current and emerging high-risk programs of oversight concern to the Congress.

## Case Examples

The following examples illustrate the comprehensive and integrated approach used by GAO to detect fraud: uncovering irregularities during the audit procedures, evaluating the internal controls in place, and identifying high-risk programs. I will also comment on the resulting public disclosure, prosecution, and corrective action, as appropriate. In all the cases cited, the abuses occurred in high-risk program areas.

In an evaluation of a military inventory control system, GAO evaluators uncovered indicators suggesting that small arms parts were being stolen from an Army National Guard site. Subsequently, auditors and investigators working together examined the controls and physical security over sensitive small arms parts at the site. The combination of the evaluators' expertise in inventory management and control procedures and the investigators' knowledge of law enforcement procedures and techniques resulted in a successful audit and investigation. The investigation revealed evidence of breakdowns in inventory management controls, theft of small arms parts, and the availability of these stolen parts through a national black market network of gun dealers. Some of these parts could be used to convert a semi-automatic civilian rifle to the equivalent of a fully automatic military assault rifle. The auditors' and investigators' efforts resulted in a congressional hearing that exposed the seriousness of the problem, a commitment from the military to strengthen controls over its supply system, the conviction of two national guardsmen for theft of small arms parts, and the conviction of a third guardsman for theft of a fully automatic assault rifle.

As a second example, in the area of health care fraud, a joint effort between GAO evaluators and investigators found prescription drug diversion to be a problem in many states, often occurring in conjunction with other types of fraud. The economic incentives were substantial for the perpetrators.

For example, the fraud included a doctor writing 2,000 prescriptions a month; a pharmacist billing for more than 30 prescriptions a month for the same person; a pharmacist billing for more than 30 prescriptions a day for a single recipient; a patient who, in one 4-day period, had the same three lab tests five times; and an organized network of colluding physicians, pharmacists, patient brokers, and other middlemen, some of whom transferred money overseas through the Bank of Credit and Commerce International. As a result of this work, congressional committees held two hearings. GAO also made recommendations to the Department of Health and Human Services and referred findings to federal law enforcement agencies.

As a third example, a joint effort by GAO investigators and evaluators on fraud in a military payroll system resulted in 2,512 individuals being referred to a military investigative agency for investigation and prosecution. The subsequent investigation strengthened audit findings by emphasizing the extent of the weaknesses identified and by exposing the loss of millions of dollars through the payroll system.

In this instance, the Department of the Army was identified as vulnerable to fraud as a result of a long-standing history of serious control weaknesses in its financial management systems. The department was designated as high risk and incorporated into GAO's strategic plan, resulting in numerous financial statement and performance audits.

During one of these financial statement audits, GAO auditors reviewed internal controls in a payroll system and found significant grounds for concern. Specifically, some crucial internal controls had been eliminated in the payroll system during a period of increased activation of military personnel. Further testing revealed numerous discrepancies between the payroll system and personnel systems. These discrepancies raised concerns that the department was paying military personnel who were not in the personnel system by utilizing a possible ghost payroll scheme. After a further review, discrepancies between payroll and personnel systems were narrowed. The findings indicated the potential for fraud, and the matter was referred to GAO investigators.

The resulting investigation determined that widespread abuse, attributable to a breakdown in the internal controls, had probably occurred. In several instances, corrupt pay/personnel clerks were able to create fictitious pay accounts, or ghost payroll employees, because there was no separation of duties between the payroll and personnel functions. In one case, a pay/personnel clerk fraudulently created two fictitious accounts and transferred approximately \$100,000 to his own account. The pay/personnel clerk further manipulated the pay system to show overseas deployment, which resulted in foreign duty pay and family separation pay. In a second instance, a pay/personnel clerk used a fabricated name and social security number to create bogus documents, thus establishing a ghost employee. The pay/personnel clerk fraudulently obtained \$71,000 in payroll payments.

The absence of internal controls that matched pay and personnel data also resulted in overpayment to employees. In hundreds of cases, the accounting system had failed to stop payments to individuals separated from a department who continued to receive paychecks improperly. These individuals failed to report or return the improper payments to the department.

GAO referred its findings to the appropriate criminal investigative unit within the department. A subsequent investigation, conducted jointly by GAO investigators and the department's criminal investigative unit, resulted in the following:

corrective action by the department to strengthen internal controls, based on recommendations by GAO;

follow-up audits by the department's internal auditors, resulting in additional corrective actions;

public hearings with newspaper and television coverage, resulting in additional referrals from the public, which identified cases of fraud that were also pursued by the department's criminal investigators;

prosecution of a number of cases; and

reimbursements to the department of the overpayments.

## Conclusion

In this era of significant fraud and corruption schemes, there is an increased expectation that government auditors will address the issue of fraud. Since 1980, GAO has been much more focused on fraud and has worked with the Congress to expand GAO's role, and improve its effectiveness, in conducting investigations into fraud, waste, and abuse. As I have discussed with you today, GAO has developed a comprehensive, meaningful, integrated, and well-rounded approach to focusing on and addressing fraud. As a result, legislative initiatives enacted by the Congress have provided the framework for the actions needed to bring about lasting solutions to serious and long-standing federal government management problems.

## **Accountability Requirements of Development Projects**

**Randolph A. Andersen, Director, Loan Department, World Bank**

My paper today will focus on:

Key tenets of financial accountability;

the changing mood of the world in which we operate;

the changing perspectives within the World Bank; and

our response to reshape accountability requirements of development projects.

First, a few figures that help explain why this conference and this subject are important to the World Bank. We lend between \$18 billion and \$20 billion per year to our borrowing member countries. The International Bank for Reconstruction and Development (IBRD) accounts for around \$14 billion and the International Development Association (IDA) for about \$6 billion of the total. Our total loan portfolio is \$165 billion for IBRD and \$97 billion for IDA. We have nearly 2,000 projects under implementation at any time and these generate about 5,000 audited annual financial statements. Our exposure at any given time is between \$5 billion and \$15 billion, depending on the audit cycle. Government auditors and private sector auditors share these audit opinions in almost equal proportions across the world, although there are important regional variations. Private sector auditors issue more qualifications than do the government auditors. So for the Bank, accountability is extremely important to ensure that, as required by our Articles, we can ensure that the proceeds of loans are used economically and efficiently, and only for the purposes for which financing has been provided. The reputation risk to the World Bank Group institutions of any failure in this regard it

potentially substantial. Our AAA rating is cherished and protected to ensure that we can have access to funds at the lowest interest rates and costs for the benefit of our borrowing member countries.

## Financial Accountability

Financial accountability is a broad concept which embraces accounting and auditing as fundamental elements of stewardship. Stewardship requires integrity and an attitude of responsiveness and responsibility, which in turn leads to good governance. Good governance facilitates development. Without financial accountability, good governance is impaired and development is impeded. In seeking financial accountability, loan portfolio managers look at:

mechanisms for ensuring compliance with loan agreements;

the quality of project financial management and accounting arrangements at the start of lending; and

the project concerns versus the broader national context for sustaining financial accountability principles.

As regards the national context, our concerns at the World Bank are focused on:

the existence of a financial accounting and reporting infrastructure capable of sustaining good project financial management. When it comes to financial accounting, there is no point in giving the patient a new limb if the body has cancer. The national context poses three kinds of associated risks:

Organizational risks at the project level related to traditional attributes of segregation of duties, clear procedures, competent staff, Physical control and independent verification.

Country risks associated with the overall environment of internal controls (including at the top), support for financial accountability infrastructure, respect for accounting and auditing in the culture and strong civil service ethic for honesty and independence.

Reputation risks to the Bank due to weak financial accountability requirements at the borrowing country level. There have been many recent threats to the Bank's credibility caused by weak accounting and auditing in borrower agencies.

Another concern in the national context is the overall proficiency of financial services in both public and private sectors, especially in countries that are privatizing their public sector enterprises.

## The World Environment

During this decade we have witnessed a distinct shift in public attitudes. Acceptance of opulence, greed, offshore bank accounts and corruption has given way to demands for accountability and transparency. Radio, television, the Internet, and other media have collapsed the traditional boundaries to such an extent that few governments or agencies can escape public scrutiny. This has increased the pressure to provide mechanisms for open accountability. New Zealand has shown the way with the adoption of national accounts based on full accrual accounting, in compliance with combined private and public sector accounting standards.

The Declaration of Principles at the Summit of the Americas here in Miami three years ago signaled the emergence of a new era in this regard:

"We recognize that our people earnestly seek greater responsiveness and efficiency from our respective governments. Democracy is strengthened by the modernization of the state, including reforms that streamline operations, reduce and simplify government rules and procedures, and make democratic institutions more transparent and accountable."

The pioneering work of Transparency International and the influence that organization has had on the OECD in setting up a working group to look at bribery in international business transactions (especially public procurement) has advanced public interest in combatting corruption. Inevitably, that group also had to look at accounting requirements, financial reporting, internal controls and audit. Even World Bank president James Wolfensohn, only one year into his tenure, felt compelled to raise the issue of corruption in his annual meeting speech in October 1996. His remarks received very broad press coverage and substantial support. The Bank has since set up a task force that is completing a study and action plan to help mitigate the worst effects of corruption and to guard against the misuse of Bank funds.

#### The Bank's Internal Environment

Mentioning the word corruption inside the World Bank has gone from verboten to being fully acceptable. So it is with borrower financial accountability: we have moved from a situation of turning a blind eye to bad practices into one of threatening and, still only occasionally, suspending loan or credit disbursements because of an accounting or auditing compliance failure. When we carried out a special review in 1993 of our financial reporting, accounting and auditing practices, we found that the main problem was a failure to follow our own procedures. We have since rewritten and improved those procedures, which have introduced some specific criteria with regard to appraisal report processing and compliance with standards.

The Bank has reviewed the work of the accounting and auditing standard setters during the last four years and has made a point of supporting those standards by:

requiring public sector enterprises to comply with International Accounting Standards of IASC or to at least indicate where they materially differ from IASC if compliance with national accounting standards is legally required;

requiring independent auditors to use the International Standards on

Auditing of the International Auditing Practices Committee of IFAC, unless national auditing standards are superior; and

requiring Auditors-General to use INTOSAI Auditing Standards, preferably in conjunction with ISAs of IFAC/ IAPC.

The Bank is also supporting the work of the Intergovernmental Group of Experts on Standards of Accounting and Reporting (ISAR Group), in Geneva, to develop environmental financial accounting guidelines and checklists. Harmonization of accounting and auditing standards is vital in today's global

marketplace to ensure proper comprehension, relevance and comparability of financial statements. It is with this in mind that we are also encouraging the Public Sector Committee of IFAC to come up with a comprehensive set of international accounting standards for governmental accounting; the sooner we all work from the same bases, the better.

One of the World Bank's key problems in recent years has been a lack of financial management specialists and accountants in its overall skills mix. This was first identified publicly by Bill Wapenhans, a former vice president at the World Bank, who in 1992 tabulated the decline in the availability of these specialists over the previous decade. We subsequently raised the issue in a task force report in 1994 and in several annual reviews of our portfolio performance. It was not until 1996, when staff began complaining that they did not have adequate intellectual guidance on borrower financial accountability issues at the Regional level, that management began to take notice. This was despite the fact that we had taken several initiatives to help Bank and borrower staff through Financial Accounting and Reporting Handbook (FARAH), which has been translated into 5 languages in addition to English. Many of you will have read in the press about the debate between the president of the Bank and the board members regarding the renewal of the Bank. Improvement in staffing skills in the areas of project financial management and accounting are a key aspect of that Strategic Compact that resulted from that debate.

### Reshaping Accountability Requirements

Throughout this time my department has been reviewing the way it does business and the procedures surrounding disbursement and borrower accountability issues. This process involved talking with around 400 people inside and outside of the Bank, and it gave us some good insights into key areas where we can improve. We also reviewed our step-by-step procedures. While our appraisal effort was weak in failing to capture the true strengths or weaknesses of financial accounting and reporting arrangements, our implementation activities through supervision and audit left us exposed to a series of potential and actual control breakdowns. This led us to redefine our disbursement and borrower accountability functions, adopt the LACI Vision (Loan Administration Change Initiative) and launch project design and implementation activities. The emphasis here is to move away from an invoice transaction approach into one of tranche payments through an enhanced special account arrangement. In order to do this we will require borrowers to establish sound financial accounting and reporting arrangements supported by adequate internal controls before we begin disbursement. We currently have 22 projects of varying complexity around the world that are entering a pilot phase intended to evaluate the efficacy of this approach.

If the pilots are successful, then all future projects will have to comply with these procedures, which demand that borrowers take charge of their own accounting and financial reporting arrangements instead of relying in many cases on the Bank's disbursement procedures to cover for the borrower's internal control weaknesses. The new arrangements also demand that the Bank deliver upgraded financial management skills at the operations vice president level, as well as in my own department. The key objective here is to move improved financial management into the development effectiveness mode instead of being a subsidiary activity that is often poorly done, adding substantial time and cost penalties when it comes to the annual audit. By having quarterly replenishments of special accounts and subjecting them to more rigorous review, the time between use of funds and accounting deadlines will be shortened, leading to a more timely suspension of disbursements, when necessary. Better accounting will lead to quicker disbursement request preparation and have an overall positive impact on development, while lowering the costs of audits.

We believe that our revised approach to accountability requirements for development projects financed by the World Bank is a wake-up call to governments and their executing agencies to get focused on financial management, accounting and reporting as well as the timeliness and quality of audits. We hope the greater accountability and transparency that usually results from attention to these issues will benefit human development as we move towards the 21st century.

# **Integrated Financial Management Systems Ghana: A Demonstration**

**Major M. S. Tara, Director of Budget, Ministry of Finance, Government of Ghana**

Mr. Chairman, Your Excellencies, Distinguished Guests, Ladies and Gentlemen, I am greatly honored to be invited to participate in this conference and indeed privileged to be asked to make a presentation on recent developments in governmental financial management in my country, Ghana, and more specifically to describe efforts to implement an integrated financial management system in Ghana.

I must begin by making clear that Ghana has not implemented an integrated financial management system (IFMS) yet. Therefore, we cannot demonstrate an IFMS that is operational. The Government of Ghana (GoG) is currently engaged in an attempt to implement an IFMS. So far, we are into the ninth month of a two-year program to implement this system. We are cautiously applying all the rules in the book to ensure that the system is successfully implemented. However, we are also concerned about the unique circumstances under which we operate, and are therefore paying particular attention to the peculiarities of our own environment and how they will make or break our system's implementation process. In this paper I intend to share our experiences during this implementation phase. I therefore think that "The Development and Implementation of an IFMS: A Ghanaian Demonstration," would be a more appropriate title for my presentation.

I will begin with a brief account of Ghana's experience preceding this effort at an IFMS implementation, from the perspective of key issues and earlier initiatives to address those issues. Thereafter, I will describe the program that is currently introducing IFMS in Ghana, including some of the peculiarities of the Ghanaian context that are affecting the implementation effort. My conclusion will consist of recommendations on how we think some of the most common pitfalls of this process can be avoided.

## **Country Experience: The Antecedents Economic Decline and Institutional Breakdown**

Ghana, like many non-oil producing countries, suffered from the energy crisis of the mid-1970s in no small way. The large increases in the price of oil from OPEC countries forced non-oil producing countries to scramble to find scarce foreign exchange (hard currency) for meeting oil import requirements, to the detriment of other sectors of the economy which also depended on foreign exchange. The oil crisis destabilized the Ghanaian economy in a serious way, exacerbating latent structural problems and managerial inadequacies.

The long-standing existence of a command economy, with its controlled prices, highly subsidized services and consumer products, bloated state-owned industries and over-employment, all contributed to a heavy public sector burden on national resources. Coupled with these was the mismanagement of the economy which was greatly facilitated by the absence of reliable information and policy formulation.

In this setting, it was perhaps inevitable that the oil crisis would set in motion a series of serious problems that threw Ghana's economy into a steep cycle of decline. The absence of hard currency led to shortages of imported goods, import license rationing and hyperinflation. Capital projects ground to a halt, existing infrastructure quickly deteriorated and the nation's institutional framework began to break down. During this period, which lasted from the late 1970s into the early 1980s, the management of the public sector was anything but rational. The lack of information suitable for macro-economic management combined with poor accounting and auditing to create a bleak outlook for all who cared about the government's financial management system.

In an effort to stabilize and subsequently rescue the economy, the government adopted an Economic Recovery Program (ERP) in 1983, aided by a World Bank-funded Structural Adjustment Program (SAP).

The SAP embraced market-oriented policies that relieved the government of the burden of subsidizing a bloated public sector. Specific measures included loosening price controls, liberalizing trade, devaluing the cedi (national currency), downsizing the public sector, and privatizing and divesting government of its interests in parastatals. These measures effectively halted the decline of the economy and brought a measure of stability, putting Ghana back on the path to controlling its public finances and managing the system rationally.

### Public Financial Management Issues and Early Initiatives

Ghana's recent economic problems, combined with a series of public expenditure reviews conducted by the World Bank between 1985 and 1990, helped to expose a number of critical issues that must be resolved in order to bring efficiency and effectiveness to Ghana's financial management system. These problems included a poor budgeting system, the size and structure of the civil service, personnel and payroll problems, ineffective auditing, a lack of expenditure reporting, incomplete aid and debt information, and the low skill level of professional accounting personnel.

Unfortunately, these problems were treated as discrete issues, and efforts to address them were conducted in an isolated, piece-meal way, when what the country needed was an integrated, system-wide approach.

Weaknesses in the budgeting system were handled first, with attention focused on the Capital Budget and later on the Recurrent Budget.

In 1986, a multi-year programming of the Capital Budget known as the Public Investment Program (PIP) was adopted in an effort to rationalize capital project selection by matching the expenditures with resource availability. Later that year, a task force was set up to develop norms for recurrent expenditures and later to computerize the budgetary process.

Public sector payroll costs, known as "Item 1" in the budget, have been and continue to be a serious concern to the government, since they account for about 70 percent of the total recurrent budget. The structure of the civil service itself has been determined to be largely responsible for these high payroll costs, and the government had consequently been considering options for reforming the civil service.

In 1987, with the assistance of the Overseas Development Administration of the United Kingdom, the GoG embarked on a Civil Service Reform Program with the goal of modernizing policies, restructuring services and reducing the staff cost burden.

Based on evidence of modest gains in these areas, the World Bank approved a program for Ghana known as Economic Management Support. Resources from this program were used to further improve budgeting, auditing, expenditure reporting, tax administration and payroll/personnel management.

The program also supported efforts to implement a Broad-Based Budget System and to streamline the personnel data system by integrating it with payroll data on a computer platform. A Budget Improvement Working Group (BIWIG) was set up to implement the Broad-Based Budget concept and a computerized Integrated Personnel Payroll Database System. The former would ensure that all donor funds including grants, aid and loans as well as internal flows are reflected in the budget to make it comprehensive, while the latter would help government eliminate 'ghost names' from the payroll and better control staff cost spending.

To address problems in the national revenue sector, the government established a National Revenue Secretariat charged with coordinating revenue-generating activities and policy. Efforts also continued in other areas, such as the establishment of a Debt Recording and Management System intended to create a comprehensive aid and debt database system. A Financial Sector Adjustment Credit also sought to reform the banking sector while making provision for improving the level of skill and competency of accounting professionals in the country.

All these initiatives were as well meaning as they were necessary. However, the results in all cases were disappointing, essentially because the initiatives were not considered from a holistic standpoint. Thus the impact did not transform the government's financial management system and did not help to implement an integrated system. Efforts still continue to be made and the government still continues to look for areas of improvement in its financial management system.

### Public Expenditure Reviews and Recent Initiatives

It was in this context that participants at the Consultative Group Meeting of 1990/91 in Paris recommended that the GoG take over preparing the Public Expenditure Reviews (PERs) which between 1985 and 1990 had been performed by the World Bank. It was hoped that these reviews would help to address weaknesses in public expenditure and the financial management system.

In 1993, the first PER performed by the GoG focused on the recurrent budget and identified major issues relating to the budgeting system, expenditure monitoring and expenditure control. Ghana's system of budgeting was basically found to be incremental in approach, with no better rationale or bases for resource allocation. The weak budgetary formulation and control were found to be central to expenditure management problems in Ghana. To help with more effective monitoring, a limited Expenditure Tracking and Control System (EXTRACON) was piloted in a number of GoG ministries between 1993-1995.

The 1994 PER concentrated on the Development or Capital Budget, identifying systematic problems in the preparation and implementation of the Development Budget.

Together, these two PERs summed up the problems affecting the Public Financial Management System in Ghana as follow:

Weak budgetary framework

Lack of proper accounting

Lack of reliable, accurate and timely information for decision making

Ineffective public expenditure monitoring and control

Lack of budget ownership

Given the scope of these recurring problems, the GoG thought it better to consider a more comprehensive and integrated approach to resolving them. The idea of a Public Financial Management Reform Program (PUFMARP) was thus conceived and debated. A consensus in favor of the integrated approach as the best solution led to a decision to seek financing in order to implement that program. At the same time, a National Institutional Renewal Program (NIRP) was also being conceived to address the governmental institutional

framework and policy formulation process. Later in 1994 NIRP was launched as a Public Sector Reform Program.

Then, in 1995, the GoG introduced the first policy-guided budget hearings intended to relate resource allocation to policy objectives.

In 1995 another PER was carried out which supported this course of action and formally helped to launch the Public Financial Management Reform Program-Ghana's first real attempt to implement an Integrated Financial Management System. Despite the formal launching, the PUFMARP was not actually established until 1996, following the recruitment of a Project Management Team and the establishment of a Secretariat.

### Public Financial Management Reform Program

This section examines the program that the Government of Ghana is currently pursuing to implement an Integrated Financial Management System known as the PUFMARP. PUFMARP is a bold and comprehensive medium-term strategic program aimed at revamping and integrating all aspects of government's financial management system and computerizing it. It takes a holistic view of the issues identified in the Public Expenditure Reviews, and is set to deal with them in a complete manner. It is multi-donor funded, but is led by the International Development Association of the World Bank.

### Program Objective

The ultimate objective of PUFMARP is to enhance the efficiency, accountability and transparency of the financial management functions of government so as to enable government maintain macro-economic stability.

### Program Components and Objectives

The program is divided into a number of components to ensure that all key aspects of the system are provided for. The core component is the Budgeting and Public Expenditure Management System (BPEMS) which is aimed at reforming the budgeting, accounting and financial reporting sub-system, and at providing a computer platform to run the entire financial management system.

The other components are those described as satellite sub-systems. They include Revenue Management and the Revenue Agencies, Cash Management, Aid and Debt Management, National Procurement, Comprehensive Auditing and Fiscal Decentralization. Each of these sub-systems are subject to reviews, assessments and implementation and are designed to interface well with the core BPEMS sub-system.

The subsidiary objectives of the sub-systems include the following:

**Budget Preparation:** To enhance the efficiency, accountability and transparency of the financial management functions of government;

**Budget Implementation:** To ensure an orderly and smooth implementation of the budget, while providing adequate flexibility to the Ministries, Departments and Agencies to manage their programs and projects, as well as to enable the Ministry of Finance to maintain oversight that is in conformity with the requirements of macro-economic stabilization;

**Accounting:** To promote a system of accounting that shows the effective utilization of the financial resources of the country; to provide a window to the public to ascertain the financial status of the Government; and to serve as a major instrument in the formulation and implementation of Government policies;

**Cash Management:** To achieve an efficient provision of the cash resources of the Government while avoiding the immobilization of resources and minimizing the costs of borrowing;

**Aid and Debt Management:** To strengthen the management of the acquisition, servicing and retirement of public debt;

**Revenue Management:** To promote systems of tax administration aimed at achieving greater taxpayer compliance and convenience, and to increase the efficiency of revenue collection, reporting and forecasting.

**Comprehensive Audit:** To promote the timely and effective audit of transactions to ensure that resources are being used for the specified purpose; and

**Procurement:** To streamline the procurement of goods and services and establish an effective monitoring and tracking system for public procurement.

## Program Management

The management structure of the program includes a Steering Committee for resolving policy issues and directing the entire implementation exercise. Day-to-day management is handled by highly qualified professionals in the Project Management Team. This team supervises the work of consultants to ensure quality control and due diligence. Consultants are responsible for developing and implementing the various sub-systems, while transferring skills to the Project Implementation Teams that are composed of Government of Ghana counterparts seconded from various governmental agencies to work on the project full-time. Together, these groups of professionals are responsible for the entire implementation exercise.

## Implementation Strategy

While project tasks for the BPEMS components are initially planned to be undertaken over two years, improvements to the system and replication to non-pilot areas is expected to take place over a five-year period. To ensure a smooth implementation exercise, the tasks have been planned over three phases.

Major activities include studying, developing and defining a new set of functional processes, transaction documents, forms and information flows relating to the budgeting, accounting and financial reporting functions of the government's financial management system. The envisioned deliverables include a revised budgetary classification; a functional design for an Expenditure Monitoring and Information System; specifications for software, hardware and related facilities; a new Chart of Accounts; complete transactions documents; application systems; and a technology architecture with specifications for hardware, software and communication systems. The implementation will include computer installations, testing, customization, piloting and replication over seven out of twenty-two ministries.

The regulatory framework, organizational issues and capacity enhancement areas are essential to the success of the program. Thus, a System High Level Design, intended to show the new institutional arrangements and legislative reforms needed, would precede systems specification and implementation.

The training would be part of the implementation exercise and would be based on the development of manuals, guidelines and departmental instructions.

## Developing and Implementing the Integrated System: A Ghanaian Demonstration

In our efforts to develop and implement our Integrated Financial Management System, two key questions remained upmost in our minds. Firstly, we wondered how we would ascertain the achievement of component objectives, and secondly, how to ensure that the needs of all components are not only sufficiently reflected in the implementation activities but that they would interface well with each other in the integrated system. Other matters of concern were the nontechnical issues which affect the implementation process. Thus, our implementation strategy made provision for the resolution of all such issues.

### Technical Requirements

The Ghanaian experiment is benefiting from the experiences of other countries and is applying all the standard rules in the book to ensure that the implementation of its Integrated Financial Management System is successful, meets the needs of users and will stand the test of time. Thus, the Government of Ghana has taken measures to ensure that all the prime requisites of an Integrated Financial Management System are provided for in PUFMARP's project design and implementation process.

The existence of a budgeting system, a treasury, public credit and accounting all constitute the core requirements of any integrated financial management system. Other areas such as the legal framework, the organizational issues, human resource requirements and information are all part of the elements of PUFMARP. Thus, technically, all the right concepts and components have been considered and planned for. What is left to be done is to ensure that the latter are adequately covered by the consultants.

### Ghanaian Peculiarities

In Ghana, there is absolute consensus on the need to develop an integrated financial management system. All the governmental agencies understand the wisdom in having a reliable, accurate and efficient information system which can be used for effective policy formulation. However, what may be described as long standing suspicions and mistrusts between the Ministry of Finance and the governmental agencies is perhaps one major problem, but by no means the only one, which can adversely affect the implementation process. Other problems peculiar to the Ghanaian environment include the implementation process; the implementation of competitive reform programs in the other governmental agencies; low remuneration for retaining well-trained and competent technical personnel; donor coordination; danger of engaging consultants who may want to implement pre-cooked systems; and an on-going decentralization program.

Traditionally, the MoF has not been able to provide all the resource needs of the governmental agencies (known as MDAs) in the right amounts and at the right time. The MDAs have therefore always viewed the MoF as seeking to control their (MDA) budgets, not giving them the freedom they need to plan and operate their budgets.

On the other hand, the MoF has mentioned that it has responsibility for ensuring macro-economic balance and stability and avoiding huge deficits which could spur inflation. Additionally, the MoF has not been confident about the capability of the MDAs to manage effectively, and report accurately, because they often lack the technical expertise and effective systems to do so. Thus the "long arm" of the MoF has to be stretched far enough in the interest of effective monitoring of MDA spending while holding back where these is the need to ensure stability.

The problem also exists because of the implementation of other reform programs within the MDAs, most of which have a financial management system component perhaps competitive to that of PUFMARP. In fact, because of this mistrust, the MDAs prefer to develop their own budget classifications, chart of accounts and implement their own accounting packages which would not facilitate integration.

The question then remaining is, how do we overcome this barrier and get the MoF and MDAs to work together in the interest of smooth implementation. The government, for its part, has taken measures to address these problems. Firstly, some of the MDA suspicions arose because some personalities have been entrenching the status quo to strengthen their positions and power. They were able to do this because they had been in their positions for decades. The government therefore effected transfers, so as to put in key positions, people who are reform minded and would like to see the system successfully implemented. Thus key chief directors and directors were transferred and new ones appointed.

Secondly, the government made public pronouncements and indicated its commitment to change in the highest circles by stating that the MoF itself is a subject of the reform program. These have had the effect of building the confidence of MDAs about the program and stimulating more interest in it.

Also, measures were taken to ensure that the MDA reform programs which had financial implications were hinged to or conditioned on their willingness to cooperate with PUFMARP's implementation.

Regarding the incentive mechanism to retain well trained and highly skilled professionals to run the system on its completion, the government has instituted a Salaries Rationalization program to deal with issues of pay. The timing of this, it is hoped, would help facilitate the implementation process.

The role of international donor agencies in the financial management system of GoG has been found to be important. In the past, donor agencies have been known to fund the implementation of accounting systems for the MDAs in a bid to track the use of their funds, and have thus caused a proliferation of accounting packages and hardware throughout the system. Now some of these donors are interested in funding some of the components of PUFMARP. Thus, the need to involve them in supervision of the projects' implementation exercise. Those that have pledged funds for the project such as IDA, ODA, CIDA and European Union have therefore been invited to sit on the steering committee. Additionally, they have been requested to restrain from continuing to fund stand-alone systems in the country. The continued coordination ensures that beneficiary governmental agencies do not thwart PUFMARP's implementation process.

The experience of Ghana in the use of consultants has grown over the years. We are aware of consultants who might not do thorough work but would go through the motions only to introduce pre-cooked systems which may not be relevant to our Ghanaian environment. The MDAs and the government sector are full of hardware and software that are not being used and are gathering dust. Also, the practice whereby donor agencies bring in their inexperienced consultants just to give them jobs is a matter of concern.

The GoG is therefore screening the choice of consultants for every aspect of the project and also scrutinizing their work to ensure that it meets standards and is acceptable. The Project Management Team in Ghana, with the help of the Project Steering Committee, has that responsibility for ensuring that value is added by consultants. Where it is necessary, sub-committees have been formed to examine and assess the consultants activities and deliverables.

Perhaps the single most important means by which this government's efforts at implementing an integrated financial management system is how to program the implementation activities to synchronize well with each other and to ensure that the sub-systems would gain synergies.

In order to do this successfully, it is equally important to involve all stake holders in the confirmation of critical issues and in envisioning the system to be developed. The outcomes of these activities would help program a comprehensive workplan clearly stating the key activities to be undertaken, and their deliverables. This is what we are doing in Ghana and our implementation program now follows this workplan. The involvement of those government official counterparts from stakeholder establishments at every level of activity helps the program to gain acceptance in the MDAs, other than MoF.

The implementation of IFMS in Ghana therefore anticipates both technical and non-technical factors that could make or break the implementation process. The political will and commitment are needed to provide the necessary support to ensure that the non-technical issues are resolved appropriately to facilitate implementation. The foregoing notwithstanding, creativity on the part of the project team and sensitivity to MDA needs are also important in ensuring success. Ghana is making efforts to ensure that all these aspects feature sufficiently in its programme's implementation.

## Conclusions and Recommendations

Mr. Chairman, Distinguished Guests, Ladies and Gentlemen, what I set out to do this afternoon was to share with you a demonstration of the Ghanaian experience which is currently on-going. I have in the process, also tried to give you a sense of the background factors which led to the need to develop and implement an IFMS. It has been shown that although the earlier initiatives were found to be helpful, they did not solve the problems in a comprehensive manner.

Mr. Chairman, I have acknowledged in my presentation, the need to ensure that the core technical components of IFMS have to be adequately provided for in order to call a system an IFMS. These include the Budgetary System, Treasury, Public Credit and Accounting; while the Legal Framework, Human Resource Development and Information System constitute other essential but non-core parts of IFMS. These, I did state are adequately provided for in the Ghanaian attempt at developing an IFMS.

However, Mr. Chairman, I have also emphasized that there are important non-technical factors which have a direct bearing on the chances of success of an IFMS implementation. These, in the Ghanaian example, include a healthy relationship between the executing agency, the Ministry of Finance and the other governmental agencies; the political will and commitment; the role of donor agencies; the competence and commitment of responsible consultants; an incentive programme to motivate and retain competent qualified staff to manage the system; and an effective and creative project management team which would use a participatory mechanism to ensure that ownership of the program spreads to all stakeholders and that its utility is shared by all.

Ghana does not yet have an operational Integrated Financial Management System. However, it has found the need for it and has taken steps to implement one, applying all the rules in the book and utilizing more pragmatic measures. It is not certain how successful Ghana will be even though it is hoped that it will succeed. However, it remains to be seen if we will be successful.

Thank You.

## **Integration of Accrual-Based Accounting, Budgetary Accounting, Cost Accounting and Performance Measurement**

### **Ronald Young, Consultant and former Executive Director, Federal Accounting Standards Advisory Board What is Integration?**

"Integration" has become one of the most overused words in federal financial management. Many use the word in reference to financial accounting and budgeting functions. "Integration" is also used in the context of multiple financial management systems operated by an agency. However, I have seen no uniform definition of the word in accounting literature. Indeed "Integration" means different things to different people.

Regarding the financial accounting and budgetary accounting processes, some think of "Integration" as a reconciliation process that explains differences between different bases of accounting (e.g., cash basis and accrual basis). Others think of it as using one basis of accounting (accountants favor full accrual) for all decisions and for budgeting purposes. New Zealand has adopted such an approach, and Great Britain is experimenting with a full accrual budget.

From what I have learned about the way governments operate, especially large ones such as the U.S. federal government, a more practical concept of "Integration" is the notion of striving for the development of a robust data base where differences between financial accounting and budget accounting are narrowed to conform to accrual-based principles where appropriate, while allowing differences where they are needed to distinguish between the unique nature of certain federal government activities and those in the private sector.

I see "Integration" of accrual-based financial accounting and the budgeting processes as adding dimensions to the way policy makers analyze and understand a program. "Integration" should improve the decision-making process by offering program managers, administrators, and elected officials a multidimensional view of a program.

Unless financial accounting information based on accrual concepts finds its way into the "management information system" of program managers, administrators and elected officials, the power of the information cannot be internalized into the decision-making process. The goal should be to assist these potential users by providing sound economic information using accrual-based accounting where appropriate. This information can then be "integrated" or "linked," with the Budget, and with financial and cost reporting, which in turn should be "linked" to performance measurement.

### **The U.S. Federal Government Works Toward "Integration" of Financial Information**

The U.S. federal government has been working toward achieving the "Integration" objective in a very serious and dedicated manner for about six years now. In 1990 the federal government enacted the Chief Financial Officers Act (CFO Act). The purpose of this act, in a nutshell, was to vastly improve financial management in the federal government. The Act established an infrastructure of chief financial officers and deputy chief financial officers whose sole responsibility is to carry out the necessary steps to achieve the expectations of the CFO Act. The Act also established the goal of modernizing and integrating all financial management systems. The CFO Act called for a data base of financial information and performance measures that managers and elected officials could rely upon to assess the cost and performance of programs. Our hope is that this data base of information would provide added dimensions to the cash-based information. Decision-makers should be able to rely upon this database for assistance in allocating resources in the Budget.

In addition to the CFO Act, Congress enacted the "Government Performance and Results Act." This law required the establishment of pilot programs to identify performance measures and track them to see if they have a useful impact in managing programs. The General Accounting Office, the Office of Management and Budget, and the Department of the Treasury also established the Federal Accounting Standards Advisory Board (FASAB). The Board's goal was to develop a body of "generally accepted accounting standards" (including cost accounting standards) for federal agencies. The agencies would incorporate these standards into their financial accounting and, in some respects, their budgetary accounting systems. They would be able to rely upon these accounting systems when preparing general purpose financial statements and cost reports that would be subject to the scrutiny of an audit. The FASAB completed a body of "generally accepted accounting standards" and cost accounting standards for the federal government in 1996. These standards are now being "integrated" into the accounting system of all federal agencies. It is expected that many of these standards will also, in time, be incorporated into the budget or at least used in making budget decisions.

## The Budget

Before going further I must explain a little about the Budget and the preeminent role it plays in the allocation of resources in the federal government. The current federal budget is, in most respects, a cash-based budget. Although the expectation is that this will change over time to recognize costs and losses as they occur (recognized and measured using accrual principles). Currently, costs or losses that would normally be recognized when incurred under private sector accounting standards are not recognized in the Budget until the year the President and/or the Congress decides there will be a cash outflow. And much of the debate in Congress is over the magnitude of the cash expenditures in the Budget. Because the Budget is mostly cash based, program managers have, in the past, only been held accountable for meeting the cash expenditures in the Budget (spending all the money allocated). Until recently very little interest has been expressed in knowing the true cost of programs (i.e., those costs and losses that would be recognized on an accrual basis) and managing to minimize those costs. Furthermore, there has been no requirement to apply any cost accounting standards to assess the full cost of delivering government goods and services. Cash outlays for programs are currently fragmented among several other programs and costs are not accounted for on a unified program basis. This has made it difficult to establish and track meaningful performance measures for programs. Until recently very little interest in obtaining such information existed. The Office of Management and Budget is exploring ways to reorganize the budget structure to be compatible with financial reporting on economic units rather than on budget accounts.

## A More Business-like Approach

However, the environment is rapidly changing. The change began in earnest when the CFO Act was enacted. The mandate became even more urgent under the leadership of Vice President Gore and his National Performance Review (NPR). The NPR focused on downsizing personnel and upgrading technology, establishing enterprise funds for federal activities that could operate in a business-like manner, outsourcing activities, modernizing and "integrating" federal financial management systems, and improving financial reporting, cost accounting and performance measurement. Our citizens are demanding a smaller and more efficiently run government, as evidenced by the election of new members of Congress who actively promote these goals. These new members of Congress, both Democratic and Republican, have shown an enormous interest in taking more business-like approaches to running the government. Many old guard politicians whose main interest was in spending money to make their constituents happy—regardless of the cost-benefit of the spending—have either retired or were defeated in the elections.

## Our Strategy

We devised a strategy to develop a body of accrual-based accounting standards that could be "integrated" into the financial accounting systems of the agencies and also supplement the Budget. When this "Integration" is complete it will significantly enhance the database of information available to managers, budget experts and others. This enhanced database will help budget specialists, administrators and elected officials with management, budget, and policy decisions. It will also help to monitor performance measures.

Only when financial accounting standards are substantially incorporated into the Budget, and managers become accountable for controlling the costs of their programs and managing to meet expectations established by performance measures, will the power of economic based accounting standards become "integrated" into the financial management process. When this occurs the behavior of managers will begin to become economically driven.

Of course, developing financial accounting and cost accounting standards for "Integration" into the budget requires financial management systems that are also "integrated" or "linked." This is an effort that is taking place in earnest in our government. In fact, each year the Office of Management and Budget and the CFOs present to Congress an updated five year plan spelling out the progress made in streamlining financial management systems. The reports that accompany these plans give the impression that progress is being made, albeit slowly.

The FASAB was created as a deliberative body and as a forum where the accountants, the budget experts and the program managers could work together to develop meaningful accounting standards to help improve the financial management of the federal government and to help the citizenry understand the condition of the government's finances. The FASAB members focused on an accrual-based accounting system, generally, for the financial reporting. However, they did not do this by simply attempting to follow private sector standards blindly. The FASAB and its staff worked closely with our Office of Management and Budget and our Congressional Budget Office to identify areas where accrual accounting might be useful for assessing the cost of programs and for incorporation into the budget.

#### Where Financial Accounting and Budgetary Accounting Meet

For example, many members of the budget community saw merit in adjusting the budget estimates of future cash outflows using an accrual-based accounting system that recognizes losses for programs such as:

Federal Pensions and Post-Retirement Benefits

Federal insurance of private sector pension programs

Federal insurance of bank deposits

Contamination and hazardous waste clean-up costs for which the federal government is responsible

Federal loans and loan guarantees

Exchange transactions in general (e.g., contracts and purchases)

Prior to the new federal accounting standards, losses associated with these major programs were only budgeted for the years when cash outflows were expected, not when the losses were actually incurred. Now, with the new standards, assuming these estimated losses are incorporated into the budget, there will be significant areas where financial reports and budget statements will be the same or very similar. Also,

the costs recognized in the budget and financial statements will become a part of the costs in measuring the performance of these programs. As you can see, I hope, bringing together financial and budgetary accounting in these major areas will achieve an "Integration" of financial accounting, cost accounting, budgetary accounting and performance measurement that should be of significant value to all who use financial data.

Financial accounting and budgetary accounting for many of our social programs will continue to be done on a cash basis. These are programs where the government is, in effect, giving money to citizens who meet certain means tests. Examples of these are food stamps, aid for dependent children, and other similar programs.

Social Security and Medicare, our two largest social programs, are also accounted for on a cash basis for now. However, many knowledgeable people believe that a full accrual liability using actuarial projection should be reported in both the financial statements and the Budget. There are also persuasive arguments to the effect that these programs are not actually different from entitlement or social programs, because they are financed mostly out of payments by workers into a "trust fund." The argument goes that these are in essence payments into a pension plan. However, our Social Security Administration, its actuaries, and many budget experts argue that these payments are really a separate tax levied to finance these programs. While this issue is being debated, the FASAB standards will require that financial accounting substantially follow the Budget accounting.

### Accounting for Capital Assets

Until the new body of "generally accepted accounting standards" was established, the federal government, as a general rule, did not capitalize assets and record depreciation on them, with the exception of revolving funds that are run like a business. (I should point out that the U.S. Comptroller General did publish a body of accounting standards known as "Title 2." These standards were viewed as a "rubber stamping" of private sector standards for the federal government. However, these standards were never generally accepted by the Executive Branch of the federal government, principally because they did not take into account the unique aspects of a national government). The federal government holds vast resources and assets. Most private sector accountants believed that these assets should be capitalized and depreciated. In fact they often cite the government of New Zealand, which does capitalize and depreciate all assets, as a model for other countries to follow. However, New Zealand has made other reforms in managing its government, which are based on a unicameral system, that are not practical for countries such as the United States. The FASAB did study the New Zealand initiative and was influenced by it in some respects. However, after a series of user needs assessments, intensive discussion by FASAB members, exposure drafts, and several public hearings, FASAB decided that the information about assets that was needed varied depending on the asset and the use. If the information is to be useful and "integrated" into the budget decisions, the accounting standards must provide for this information.

Program managers and budget analysts are very interested in knowing the full cost of delivering government services, including the capital cost (depreciation) of the assets used and consumed in delivering the service. For example, they agree that buildings, computers, furniture, rolling stock, communications equipment, government roads and timber grown for harvest, should be capitalized and depreciated. And the depreciation should be part of the total cost of the goods or services. These costs should eventually be incorporated into budget decisions and into the Budget. However, regarding our military weapon systems (e.g., ships, missiles, tanks, aircraft) cost information is considered important, but the depreciation component is not. More important to users is information about the magnitude of deferred maintenance associated with these assets. A reliable assessment of the dollar value of deferred maintenance can be used for budget purposes to provide for future cash outlays that will be needed to keep these assets operational. Regarding nuclear submarines, the cost of decontaminating these vessels (measured in the billions of dollars) at the end of their useful life is important information to consider in the

Budget. Estimates of decontamination costs can be accrued over the life of the vessel and included in the total cost of operations; a liability for the future cost of decontamination can also be established. The past practice has been to ignore these costs until the time when the actual decontamination was scheduled. These are some additional examples of "Integration" of financial accounting and budgetary accounting.

The federal government owns vast amounts of land. Those who manage these lands and many members of Congress are not interested in placing a monetary value on them in order to capitalize them on a balance sheet. The value of these lands in total is not a meaningful figure because the government is not in the business of selling land. The government is the custodian of the public lands. However, from a management and budgetary perspective there is great interest in the quantities of land, locations, uses, maintenance costs, and cost to preserve (prevent erosion), or clean up hazardous waste. Users believe this type of information is useful from the management and budget perspective. By designing accounting standards to accommodate these needs the information could be "integrated" into the decision process and into the Budget.

### A Need For Cost Accounting

When the FASAB set out to accomplish its tasks, members of Congress, program managers and budget experts expressed an overriding interest in good cost information. They were extremely interested in knowing the full cost of delivering government goods and services. They did not see a lot of value in the balance sheet (except for business type activities). Therefore a major focus in designing the accounting standards was to ensure the development of adequate expense and cost information that would help determine the full cost of providing goods and services on a program basis. The balance sheet was a secondary concern, though still important. Both program managers and budget analysts believed that unless the accounting standards provided for consistent and reliable cost and expense information about the full cost of delivering services and for use in performance measurement, there could be no meaningful "Integration" into the management information system.

The FASAB developed a body of cost accounting standards that all federal agencies are required to implement soon. The FASAB endorsed Activity Based Costing (ABC) as superior to traditional costing approaches but they did not require it. Whether traditional costing or ABC is implemented by an agency, it is likely to be a major effort because very few people in the federal government have the knowledge and skills to design even a rudimentary cost accounting system. Furthermore, many agencies do not have accounting and other systems that are integrated to the extent that they provide consistent and reliable information. This will change, but it will take time. There are several organizations in our government where efforts to install cost accounting systems are in progress. Most seem to be favoring ABC systems. In many instances these agencies are also attempting to install basic core accounting systems (accounting, payroll, travel, inventory). In these particular instances consultants, such as myself, work with agency staff to help them integrate their financial accounting and cost accounting. We help them analyze their business processes and develop links between work activities and products or services so that the cost of only the activities used are part of the cost of production. To accommodate the cost accounting process in most instances some revisions to the general ledger accounts are needed. Then, depending on the type of cost accounting system to be used (i.e., activity based or traditional), appropriate cost accounting software will be needed. This software must easily interface with the accounting system. The software draws off needed expense data and activity data from the accounting system and other systems, and performs cost analysis based on the user-defined parameters. A number of commercial off-the-shelf software packages are available to suit these user needs. This is much more cost-effective than attempting to develop one's own cost accounting software. Where management prefers the traditional cost accounting method, accounting and financial management packages exist that contain tables permitting the allocation of cost to departments and products. Most entities who are developing cost accounting systems today are revolving funds and enterprise funds where the cost of producing goods or services is expected to be recovered by user fees. However, the new cost accounting standards must be implemented by all federal agencies. This effort to develop cost accounting systems for all agencies will

take time, but I believe with the high quality cadre of CFOs the federal government has recruited, and with their persistent effort, the practice of cost accounting will become routine in the not too distant future.

## A Government-Wide Standard General Ledger

In the federal government we have what is known as the Standard General Ledger. This is a uniform chart of accounts that must be maintained at the government-wide level. Each department and agency is permitted to maintain more detailed accounts for their own financial management purposes. All agencies are required to be in compliance with the Standard General Ledger. However, only about 60% are in full compliance—the others use conversion tables to produce data for the Standard General Ledger, while working toward compliance. The quality and reliability of these converted data are in question. As the FASAB developed the new accounting standards for the federal government, the FASAB staff worked with the agencies to make the needed changes (e.g., add, modify and delete accounts) in the Standard General Ledger. This helped to facilitate the integration of the accounting standards into each agency's financial management system. This is because each agency's financial statements are expected to be based on the information drawn from their own general ledger which should be mapped to the Standard General Ledger.

## Conclusion

I would like to conclude by emphasizing that the "Integration" of accrual-based accounting standards into systems is more than a mechanical feat. It is a systematic approach to developing standards that meet the needs of users. If these needs are satisfied, the "Integration" is achieved when the users (i.e., program managers, budget analysts, elected officials, and public citizens) use the information to manage programs, control costs, and influence the allocation of resources in the Budget.

## **The Balanced Budget and Interperiod equity: Implications for Financial Reporting**

**K.K. Raman, O.J. Curry Professor, College of Business Administration, University of North Texas**

A critical issue in international financial management is that of "balancing the government's books" (The Economist 1994, p. 73). Since governmental commitments to maintaining or improving citizens' well-being are subject to resource constraints, the Governmental Accounting Standards Board (which is the accounting standard setting body for state and local governments in the U.S.) has noted the need for governments to "live within their means" and has espoused the notion of interperiod equity (IPE) as a performance measure (GASB 1987, para 59, 61).

According to Concepts Statement No. 1 (GASB 1987, para 60), interperiod equity has its roots in the various state and local government balanced budget statutes the intent of which is to obtain "intergenerational equity." However, since the term generation implies "approximately 30 years," the Board (para 60) believes that from a financial reporting perspective the appropriate concept is that of "yearly balance."

Concepts Statement No. 1 (GASB 1987) indicates that interperiod equity (IPE) can be assessed by "whether current-year revenues are sufficient to pay for the services provided that year" (para 61). More recently, the GASB (1995) has suggested that an interperiod equity-related result is "whether the government's financial position is better or worse as a result of the year's

activities." To date, the GASB has not provided an operational definition of IPE and also has not identified the appropriate capital maintenance concept underlying IPE.

The objective of this paper is to benefit professionals in governmental financial management by increasing their common understanding of concepts such as the balanced budget, intergenerational equity, and the relevance of IPE information. Over the past decade, the GASB's attempts at reforming the financial reporting model have proved to be very contentious. The paper reviews briefly the ongoing attempts at reform and discusses the notion of a targeted level of service capacity as the appropriate capital maintenance concept for governments.

## The Balanced Budget and IPE

In American politics, the balanced budget appears to have a symbolic value representing a particular vision of government (for example, bureaucratic professionalism, moral rectitude and restraint, prudent management) that transcends any accounting interpretation or measurement of the matter (Savage 1988). In fact, closer examination suggests considerable ambiguity as to exactly what is implied by a balanced budget. According to the General Accounting Office (GAO 1985), 49 of the 50 states have a balanced budget requirement. However, the requirement usually applies only to the general fund and excludes the multitude of other funds. The basis of accounting is typically the cash basis. Technically, a budget may be balanced by postponing capital expenditures, by borrowing, or by the sale (or sale and leaseback) of capital assets. Also, the requirement is generally *ex ante* or "before the fact," that is, the governor is required to submit and/or the legislature is required to pass a balanced budget, but actual results at the end of the year do not have to be in balance.

Although Concepts Statement No. 1 (GASB 1987) traces the roots of interperiod equity to the balanced budget, the governmental budget is basically a current financing plan (that is, a plan to finance current period expenditures for operations, debt service, and capital outlays) rather than an instrument for measuring interperiod equity. An "expenditure" occurs when goods and services (including capital assets) are received and either a liability is incurred (the accrual basis) or when cash is paid (the cash basis). In contrast, an "expense" occurs when goods and services (including capital assets) are consumed. "Cost" is a measure of the economic resources utilized for a particular purpose or in providing a particular service. Both expenses and costs incurred are measured on an accrual basis since accrual accounting better reflects underlying economic events.

As a current financing plan, the budget is concerned with current period expenditures not expenses or costs incurred. Expenditures are recognized in the budget only to the extent that claims will be paid-off by the end of the year (or shortly thereafter). Hence, it is possible to defer a portion of current labor costs to future taxpayers by not funding (or underfunding) pension obligations. Other fiscal practices aimed at balancing the budget (for example, borrowing, the sale or sale-leaseback of capital assets, deferral of maintenance) also have the effect of deferring costs to future taxpayers.<sup>1</sup>

In the context of current period transactions that have long-term financial implications (such as unfunded retiree health benefits or zero coupon bonds), it is possible to legally balance the budget and yet defer the burden of current period services to future taxpayers. Thus, while a balanced budget has symbolic value, it is neither synonymous with nor can it assure interperiod equity.

## Intergenerational Equity, Taxpayer Mobility, and Generational Accounting

### Intergenerational Equity

As indicated in Concepts Statement No. 1 (GASB 1987, para. 60), intergenerational equity implies that “the current generation of citizens should not be able to shift the burden of paying for current-year services to future-year taxpayers.” However, the term “generation” is used in two distinctly different ways in the literature. Below, the two alternative definitions are discussed briefly and the definition appropriate for state/local government financial reporting is identified.

In the “overlapping generations” model, a generation is viewed as all individuals who were born at approximately the same time so that, in fact, a number of generations can coexist simultaneously (Rosen 1988, Chapter 18). The phrase “approximately the same time” refers to an undefined but flexible time window. Thus, the baby boom generation is defined as those born between 1946 and 1962 since birth rates were unusually high during that 17 year period.

In the overlapping generations approach, redistributive effects are examined by measuring the lifetime consumption of a group of individuals of approximately the same age. As an example, consider the redistribution effects of the social security program. Under this program (which until recently was subject to pay-as-you-go financing), those retiring until about 1980 received a windfall gain (that is, returns greater than what they would have received by saving privately the taxes they paid), because they were taxed for only a portion of their working years and/or at a very low rate. These windfall gains were or will be financed by the young (or unborn) who face the steeply higher taxes imposed since 1983. It is estimated that many retiring after 2000 will in fact receive a negative return on their payments (Browning and Browning 1987).

Alternatively, in the “Lerner” model a generation is viewed as consisting of all individuals who are alive during a given time period (Rosen 1988, Chapter 18). In the Lerner model, redistributive effects are examined by measuring the consumption of a group of individuals (residents) who are alive during a given time frame. In this model, the burden of current government services can be passed on to future residents by financing current services through borrowing with the debt issued to non-residents. Servicing that debt will require transfers from future residents (taxpayers) to non-resident bondholders without any reciprocal exchange. Hence, the overall consumption of those future residents will be reduced.

With its yearly orientation, interperiod equity is consistent with the Lerner model. This is clear from the fact that Concepts Statement No. 1 does not seek to measure burden shifting across residents of various age groups. Rather, the GASB seeks to measure burden shifting across residents of different fiscal time periods.

### Why Taxpayer Mobility is Relevant

If taxpayers have zero mobility (that is, spend all their lives in the same state or local government), the burden of government spending (whether financed by taxes or by borrowing) will likely fall on the same group of taxpayers over their lifetime. However, taxpayers who are mobile can escape the burden of current period services (if financed by borrowing) by relocating elsewhere before the debt matures, although potentially they could face similar burdens in their new location. Current taxpayers can also avoid the burden of debt-financed government spending simply by dying before the debt matures and leaving an insufficient bequest to their offspring (Barro 1974). In the context of taxpayer mobility, the burden of deferred taxes will fall on those original taxpayers who remain and new residents who have moved in since the deferral.<sup>2</sup>

Taxpayers relocate for a variety of reasons (job transfers, children leaving home, retirement, etc.) and it has been estimated that in the U.S. on average approximately one urban household in five moves every year. Dye (1990, p. 16) notes that competitive federalism (that is, a system in which state and local governments compete for taxpayers) does not require that every taxpayer be mobile but only that a significant number of taxpayers be prepared to relocate in response to government policies. “The

importance of ... (taxpayer) mobility for state-local government finance cannot be overemphasized (Fisher 1988, p. 3).

In the context of taxpayer mobility and a competitive political climate, Inman (1982) suggests that current taxpayers and public officials have an incentive to defer the cost of current services to future periods and a different set of taxpayers. Inman (1983) points out that the primary need of a politician seeking re-election is to satisfy current voters, and that this need generates a "what have you done for me lately" myopic mentality where only current services and short-run payoffs matter. Public officials face competing pressures from "hardpressed taxpayers, concerned investors, worried public employees, and needy residents" (Inman 1983, p. 17). Especially in the context of a stagnating or declining private economy and limited federal assistance, it can be very tempting to turn to future (and presumably different) taxpayers for aid by borrowing against future tax revenues through various strategies for deferring the cost of current period services.

By subsidizing the cost of current services, a deferral strategy can result in an overconsumption of government services and a misallocation of resources. In economic terms, current government spending will increase inefficiently in an allocative sense (beyond that consistent with social welfare).

With taxpayer mobility, it is not meaningful in state and local government finance to track the lifetime consumption of residents since current taxpayers may not remain to become future taxpayers. Hence, the Lerner model (discussed previously) is appropriate for analyzing state/local government intergenerational equity issues. Conceptually, the focus on a limited time frame (for example, a fiscal year, without consideration of the age distribution of current residents) implicit in the GASB notion of interperiod equity is the preferred approach.<sup>3</sup>

### Generational Accounting

In recent years, Auerbach et al. (1991) and Kotlikoff (1992) have developed an analytic tool which they call "generational accounting" for addressing intergenerational equity issues primarily at the federal level. The purpose of the analysis is to estimate the distributive effects of government fiscal policy across different age groups. The outcome of the analysis is an estimated lifetime net tax rate for each age group defined as "the present value at birth of net taxes paid over a lifetime as a percentage of the present value at birth of labor income earned over a lifetime" (Congressional Budget Office 1995, p. xi). Thus, for those born in 1930 the lifetime net tax rate is estimated to be 31 percent while for those born in the future (after 1992) the rate is estimated to be (an extraordinarily high) 82 percent. However, as pointed out by Baker (1995) and the Congressional Budget Office (CBO 1995), due to a number of omissions the analysis fails to provide a reasonable measure of the tax burden or the economic well being of future generations. For example, the analysis includes only labor income but not capital income such as dividends, capital gains, and interest in the lifetime income of future generations. Also, the analysis fails to distinguish between operating expenditures and capital expenditures for governments. Thus, while future taxes required to service government debt is considered, the benefits to future generations from current capital spending are ignored in the analysis. The analysis is also very sensitive to assumptions such as the discount rate used in computing present values of future taxes and labor income. For these reasons, the CBO (1995, p. ix, 18) notes that generational accounting cannot serve as an official statement although it may be useful as an "abstract indicator";

By focusing on the lifetime taxes and income of different age groups, generational accounting is unambiguously based on the overlapping generations model. As noted previously, given taxpayer mobility, it is the Lerner model (rather the overlapping generations model) which is appropriate for addressing state and local government intergenerational equity issues and IPE. Thus, "generational accounting" as articulated by Auerbach et al. (1991) and Kotlikoff (1992) is not a useful analytic tool from a state and local government financial reporting perspective.

## The Stewardship/Value-Relevance of IPE Information

From a stewardship (accountability) perspective, Gjesdal (1981, p. 214) notes that the demand for information is “about a variable of choice for the purpose of controlling it.” Since public officials have the choice (and possibly the incentive) to defer current period costs to future periods, legislative and oversight bodies need IPE information to be able to control deferral behavior. Although financial statements provide only historical information, the mere existence of a periodic (and timely) measurement and disclosure system can have a deterrent effect. Potentially, timely financial reporting may help constrain (deter) professional politicians from simultaneously supporting new programs (especially ones with deferred payments) and opposing tax increases. Hence, IPE information would be relevant as an instrument for controlling the pursuit of deferral strategies by public officials. In the words of Justice Brandeis, sunshine (timely measurement and disclosure) may be the best disinfectant.

IPE information would also be relevant from a valuation perspective. Value-relevance refers to the usefulness of information in pricing assets. Prior research (Raman and Wilson 1990; Lin and Raman 1996) suggests that governmental accounting information is useful in pricing municipal (state and local government) bonds and residential real estate. Burdens assumed by future taxpayers for services previously provided basically represent a potential claim on the future tax revenues and cash flows of the governmental unit, and should be reflected (priced) in lower asset values. From a valuation perspective, IPE reporting would potentially reduce “information costs” (that is, the costs to potential bondholders and homeowners of searching for and obtaining value-relevant information) by measuring and disclosing the extent to which the cost of current services is being deferred.

Lev (1988) notes that the purpose of financial reporting regulation is to promote ex ante or “before the fact” equity (equality of opportunity) in obtaining access to information. The role of financial reporting is to reduce “information asymmetry” or the unequal distribution of information which would otherwise exist. Lev (1988) notes that the last two U.S. administrations were characterized by the deregulation of various industries (e.g., airlines, trucking, financial institutions, and telephone utilities). However, the fact that disclosure regulation (for businesses) withstood these changes can be potentially explained by the equity justification that underlies reporting regulation. This equity orientation provides the basic rationale for regulating and mandating financial disclosure. From this perspective, IPE reporting can be viewed as promoting equity by reducing the unequal distribution (asymmetry) of information between current and future bondholders and taxpayers.

## Reform and the GASB Due Process

### Why Current Accounting Standards Don't Work

Under current accounting standards, the basic tax-supported services provided by governments are accounted for in the governmental funds. The measurement focus in the governmental funds (that is, what the fund is attempting to measure in the operating statement) is the flow of current financial resources on a modified accrual basis. Hence, current period revenues as well as proceeds from the sale of bonds or capital assets are reported as increases in financial resources. Similarly, current services spending as well as bond redemptions and capital asset purchases are reported as decreases in financial resources. The current financial resources measurement focus is consistent with the traditional role of the governmental budget as a current financing plan and that of the governmental funds as short-term financing vehicles. However, by focusing on what is available for spending, the governmental funds ignore the long-term financial implications of current transactions and events and are unable to demonstrate consistency (or lack thereof) with interperiod equity (IPE).

Also, under current standards, financial data are not aggregated beyond the fund-type level. Data from one governmental fund-type (such as the general fund) are not combined with data from other governmental fund-types (such as the special revenue funds) to provide an aggregated single column

operating statement for the government-wide entity. Under current standards, there is no aggregation and it is not possible to obtain a view of the governmental entity's overall financial picture including consistency (or lack thereof) with interperiod equity (IPE).

## The 1995 Preliminary Views

Over the past decade, the GASB (1985, 1990, 1992, 1994, 1995) has explored a number of alternative reporting models in its effort to reform state and local government financial reporting. The issues are very contentious and relatively little progress appears to have been made. Miller (1995) notes that the GASB's constituents appear to be split between those who are resistant to change and those who are insistent on change.

For the sake of brevity, we focus on the GASB's most recent proposal – the 1995 Preliminary Views document. This document proposes two sets of financial statements based on a “dual perspective” – a fund perspective and an entity-wide perspective. The two sets of statements would use different measurement focuses and would not have to be reconciled. From a fund perspective, the individual governmental funds would continue to use the flow of current financial resources measurement focus. However, from an entity-wide perspective all governmental activities would be reported using the flow of economic resources measurement focus and include a “capital use charge” (depreciation expense) based on the historical cost of general fixed assets including infrastructure assets (GASB 1995, p. 33). The entity-wide operating statement would provide information about IPE by reporting an overall excess or deficiency for the period.

## Measuring IPE Within a Flow of Financial Resources Framework

By recommending a flow of economic resources measurement focus (including depreciation calculations based on the historical cost of general fixed assets), the Board's most recent proposal (GASB 1995) essentially adopts the business reporting model. This represents a radical departure from the traditional measurement focus in the governmental funds (and in the governmental budget) which is the flow of financial (not economic) resources. Truth be said, the business reporting model has severe problems of its own and offers no panacea (AICPA 1994; Elliott and Jacobson 1991). Understandably, the latest proposal (GASB 1995), like its earlier predecessors, has met with widespread disapproval and may not be finally adopted (Miller 1995). Below, the measurement of IPE within a flow of total financial resources framework is examined.

## Alternative Capital Maintenance Concepts

As noted previously, Concepts Statement No. 1 (GASB 1987) discusses IPE without identifying the appropriate capital maintenance concept for governments. Alternative capital maintenance concepts will lead to different measures of capital use (and IPE), and are discussed below.

The total financial resources measurement focus (GASB 1990) is intended to permit the recognition of the effects of transactions or events on financial resources in the period they occur regardless of when cash is paid. Thus, the long-term financial implications of current period transactions and events would be captured in the current period within a flows of financial resources framework. In measuring IPE within this framework, current period revenues would exclude the proceeds of bond issues and the sale of capital assets. Similarly, current services spending (operating expenditures) would exclude capital expenditures and debt redemptions. However, in measuring IPE, it would not be enough to match revenues with operating expenditures only since an important element of the cost of current services is the use of general fixed assets. To measure IPE, revenues would have to be matched with operating expenditures as well as a capital use charge (including necessary maintenance, as discussed below). A capital use charge based on traditional depreciation calculations would be a non-cash item and would be irrelevant from a budgetary (current financing plan) perspective. Alternatively, as discussed below, a capital use (and

maintenance) charge could be estimated within a flow of financial resources framework based on the maintenance of a targeted level of service capacity as the appropriate capital maintenance concept underlying IPE.

With a system of infrastructure assets (defined as the system of assets behind basic services such as transportation, waste disposal, water resources, electricity generation, etc.), timely maintenance and renewal (replacement of elements of the system) will likely extend the service life of these assets indefinitely. Currie (1987, p. 8) notes that with these fixed assets management's accountability is "not to maintain any specific asset, but to maintain the operating capability of the system." With others, such as equipment, the asset will eventually need replacement even with regular maintenance.

The decline in state and local government service capacity as a result of inadequate maintenance or replacement has been noted in a number of studies (Peterson 1978; Choate and Walter 1981). Moreover, delayed maintenance can mean, ultimately, higher repair and replacement expenditures in future periods (Peterson 1978, p. 49).<sup>4</sup>

If capital assets are not maintained or replaced, the deterioration or loss of service capacity can pass on to future taxpayers a portion of the burden or cost of services provided in the current period—as effectively as an increase in liabilities for unfunded pension obligations—and thus violate interperiod equity. The comparison with underfunded pensions is apt, since the deferral of essential maintenance and replacement is similar to the deferral of a portion of current labor costs in the form of unfunded pensions. In a competitive political environment, both allow public officials an opportunity to provide a higher level of services to current taxpayers without having to raise current taxes.<sup>5</sup>

### Financial Capital Maintenance

Business reporting is based on the concept of maintaining "financial" capital and capital use (depreciation) is computed based on the historical cost of capital assets. Implicitly, it is this very same capital maintenance concept that is being proposed for governments (GASB 1995). However, a capital use charge based on historical cost is unlikely to maintain the service capacity of governmental general fixed assets. In business accounting, historical cost depreciation came into vogue only after the income tax laws allowed for cost recovery (the deductibility of the original cost of a capital asset over its estimated life) in computing taxable income (Hendricksen 1982, pp. 30-31). Beyond the recovery of original cost for tax purposes, historical cost depreciation appears to have few uses. As noted by Anthony (1989, p. 68), historical cost depreciation cannot be used for cost comparisons since differences in depreciation methods, estimated service lives, and the cost of similar assets acquired at different time periods would render such comparisons "dubious." Anthony provides examples of business cost comparison studies which basically omit depreciation as an expense on grounds of non-comparability. He acknowledges that depreciated net book values do not indicate remaining service potential, do not facilitate planning for capital budgets, and do not indicate whether fixed assets have been properly maintained or their replacement cost. Hence, the maintenance of financial capital (a largely irrelevant objective in the government context) would be the sole reason for recording depreciation based on the historical cost of general fixed assets.

### Physical Capital Maintenance

An alternative to historical cost depreciation is depreciation based on the replacement cost of capital assets. Replacement cost depreciation is designed to maintain "physical" capital in the context of rising prices.<sup>6</sup> However, a capital use charge based on replacement costs would have adverse implications for the "pricing" of (that is, taxes raised to pay for) government services. Pricing in the regulatory and government contexts has to take "fairness" into account. As in the context of utility regulation, it would be considered unfair to "bill" consumers (current

taxpayers) for current period services based on higher replacement costs when old capital assets are currently still in service (Zajac 1978).

Moreover, for governments, the maintenance of physical capital may not be an appropriate objective if the population is decreasing or if there is a change in taxpayer preferences for public services as reflected in the so-called tax revolt since the late 1970s. It would be unrealistic for the GASB to require that the operating statement include a sufficient capital use charge for maintaining physical capital when citizens would rather spend their income on other things besides the stock of public capital.

There is perhaps a more important and fundamental reason for shying away from depreciation calculations of any kind in computing capital use charges on general fixed assets. Depreciation is a non-cash charge, is not meant to suggest that capital assets are actually replaced as used, and have no implications for cash flows. In the government environment, "pricing" (that is, taxing) decisions are made within a budgetary (current financing plan) framework. As noted by the GASB (1987), the governmental budget is a device for obtaining resources since it establishes the amount of tax revenues (such as property taxes) to be raised for financing proposed spending. If IPE reporting is to have an impact, it must have a visible connection to the budget and affect current period taxing and spending decisions. IPE reporting is more likely to have an impact if actors in the budgetary drama (taxpayers, legislators, special interest groups, and others) perceive the capital use charge as representing or implying a claim on financial resources. In contrast, IPE reporting based on depreciation calculations could be viewed as irrelevant because of the absence of a visible connection with the current need for financial resources.

### Service Capacity Maintenance

For these reasons, this section explores a method for measuring capital consumption costs within a flow of total financial resources framework. As discussed by Riordan et al. (1987), a pre-requisite to assessing existing service capacity for governments is to have adequate (auditable) fixed asset reporting systems. In the context of changing demographics and taxpayer preferences, it would be necessary for governments to identify a targeted level of service capacity. If the city population is declining, for example, targeted service capacity may be below existing service capacity.<sup>7</sup> On the other hand, if the population is increasing, the targeted service capacity may exceed existing capacity. Although not explicitly identified, a targeted level of service capacity is implicit in the article by Riordan et al. (1987) which discusses the multi-year capital budgeting process in Dayton, Ohio. As outlined by Riordan et al., a government will need to prepare an inventory and condition assessment of its capital assets. Such an assessment is the starting point for preparing an annual engineering-based estimated maintenance and replacement schedule as part of a city's multi-year capital budgeting process. The objective of the process is to estimate the annual expenditures necessary to provide for adequate maintenance and orderly replacement of capital assets and to minimize future maintenance and replacement costs. According to Riordan et al. (1987, p. 47), such a comprehensive multi-year capital plan for maintenance, repair, and replacement has been implemented by the city of Dayton, Ohio, and the entire process is "easily transferable" to other cities.

In measuring interperiod equity, capital use charges can be proxied by the engineering-based estimate of necessary maintenance, repair, and replacement expenditures each period.<sup>8</sup> The estimate of necessary maintenance, repair, and replacement costs each period would clearly be a subjective "soft" number. Riordan et al. suggest that the engineering-based estimates could be determined by consensus as part of the capital budgeting process. It is relevant to note that there are other examples of the use of "soft," subjective numbers in both governmental and business reporting, for example, pension expense estimates. As pointed out by Wallman (1995, 1996) and Burton (1981, p. 55), it is characteristic of financial reporting numbers to be "uncertain, interpretive and subjective."

To summarize, the maintenance of a targeted level of service capacity (implicitly incorporating estimates of changing demographics and taxpayer preferences for public services) would be appropriate as the capital maintenance concept for governments. The maintenance, repair, and replacement expenditures estimated to be necessary each period (as part of a comprehensive engineering-based multi-year capital budgeting process) would be usable as a capital use charge in measuring IPE. Although the notion of a targeted service capacity would be perceived as a "soft" concept, it would be more meaningful and relevant for governments than the maintenance of financial (or physical) capital implicit in depreciation calculations.

## Conclusions

Interperiod equity (IPE) is potentially an important concept from both a stewardship as well as a value-relevance perspective. However, since the governmental budget is a current financing plan rather than an instrument for measuring IPE, a balanced budget is no guarantee of interperiod equity. As yet, the GASB has not operationally defined IPE and also has not identified the capital maintenance concept underlying IPE. Implicitly, the measurement of IPE rests on a concept of capital that must be maintained before interperiod equity can be said to have been achieved.

In this paper, the maintenance of a targeted level of service capacity was identified as the appropriate capital maintenance concept for governments. Although historical cost depreciation is consistent with the maintenance of financial capital, it is not consistent with maintaining service capacity. Albeit a "soft" number when compared with historical cost depreciation, an annual estimate of necessary maintenance, repair, and replacement capital spending based on a comprehensive engineering-based multi-year capital plan would be appropriate for governments as a measure of capital use. This particular approach will permit capital use (and IPE) to be measured within a flow of total financial resources framework.

In the business context, Anthony (1976) suggests that prices are targeted to allow for cost recovery (including historical cost depreciation of capital assets) and a reasonable return on the financial capital employed by the firm. However, in the government context, the budget is a device for obtaining resources and revenues (such as property taxes) are targeted based not on cost recovery but on estimated expenditures for the current period. When spending needs exceed available revenues (as is typically the case), it would be very hard to convince taxpayers, legislators, special interests, and others about the need to set aside (or raise additional) revenues simply to cover non-cash depreciation charges. During budgetary hearings, capital use charges based on depreciation calculations are likely to be viewed as irrelevant (and consequently ignored) by legislators and others because of the absence of a visible connection with the need for current spending.

Traditional governmental budgeting has been much maligned but also has shown endurance and persistence.<sup>9</sup> The truth of the matter is that the traditional government budget is not about to disappear. If IPE reporting is to make a difference, it must influence the budgetary process. To be able to influence the budgetary process, IPE reporting will need to measure capital use within a flow of financial resources framework.

A multi-year capital plan for maintenance, repair, and replacement spending should have a positive effect on the budgetary process by encouraging greater attention to the future. In this sense, engineering-based multi-year capital plans should do for capital use charges what actuarial funding plans have accomplished for pension costs. Without an actuarial study and funding plan, current spending needs for pensions are likely to be perceived by taxpayers and legislators as being the same amount as what is currently payable to retirees (pay-as-you-go funding). With an actuarial funding plan, it is much easier for taxpayers and others to understand the need for current spending in excess of current retiree benefits in order to provide for the delayed costs of current period services. Like actuarial funding plans, engineering-based multi-year maintenance, repair, and capital replacement plans are likely to produce "soft" and

arguable estimates. Nonetheless, these plans are likely to add the necessary multi-period perspective to budgetary current financing plans and promote IPE.

## Footnotes

1. An article in *Business Week* (1991) notes that the State of New York reduced the deficit in its general fund (for fiscal year 1991) by the sale or sale-leaseback of various state assets (e.g., portions of state highways, Attica prison) to off-budget state agencies. The state agencies, in turn, obtained the necessary resources to make the purchases by issuing new long-term regular or zero-coupon bonds. Also, Massachusetts reduced its 1991 budget deficit by issuing \$1.2 billion of long-term bonds. The article observes that zero-coupon bonds are an attractive means of borrowing for governments since the budgetary impact of both interest and principal payments can be postponed many years into the future. It quotes New York State Comptroller Regan as stating that the effect of these budget balancing fiscal practices is to "shift the cost to tomorrow's taxpayers";
2. If a state or local government is losing population (as many in the U.S. currently are), the remaining residents are likely to face a disproportionately larger deferred burden per capita. The burden of deferred taxes may also be expected to fall disproportionately on those who are least mobile such as the poor.
3. Although the GASB (1987, para 60) speaks of "yearly balance," Marks and Raman (1996) provide empirical evidence which suggests that public officials have a multi-year budgeting horizon and that IPE may not be achievable each and every year. Still, reported yearly IPE would be useful as a measure of whether a government has lived within its means that year.
4. Leonard (1986) notes that preventive maintenance, although essential, has a low profile and therefore tends to be neglected. Moreover, during a financial bind maintenance is likely to be the first target for a budget cut. A city mayor is quoted as saying that "In the choice between laying off police and maintaining sewers, the sewers always lose" (Leonard 1986, p. 170).
5. Recent research (Aschauer 1989; Munnell 1990; Eberts 1990) indicates that there is more to public sector service capacity than simply the level of government services. It is suggested that public infrastructure enters the production function not only for government services but also for private sector outputs. Moreover, the public capital stock can impact private investment and location decisions as well as the productivity of private inputs. Both Aschauer and Munnell suggest an empirical association between the decrease in the growth rate of U.S. productivity since the 1970s and the decrease in the rate of investments in public capital stock. Hence, a deterioration or loss of service capacity can pass on to future residents a double burden: a reduced level of government services and a diminished level of private sector productivity.
6. There is extensive discussion in the business literature on the pros and cons of financial vs. physical capital maintenance in the context of changing prices. For brevity, that literature is not reviewed here.
7. Hulten and Peterson (1984) suggest that many older cities with declining populations have capital stock that is probably more extensive than what they need.
8. Anthony (1989) suggests that annual debt service (principal repayments and interest on bonds) could be used as a proxy for capital use. However, governments vary greatly in the extent to which they use debt to finance capital expenditures (Gordon and Slemrod 1986). Also, it would be difficult to distinguish between debt repayments on borrowings used for capital outlays and repayments on borrowings used to finance operating deficits. Further, there is likely to be little or no association between annual debt service and the necessary expenditure on maintenance and repair of service capacity. For these reasons, annual

debt service is likely to be a very poor proxy for capital use. In general, borrowings and repayments are financing transactions that should not be allowed to affect the measurement of operating results and IPE.

9. Despite its many defects (for example, the cash basis of accounting, focus on inputs instead of outputs, a built-in short-term or current focus), the traditional budget endures primarily because it is effective as a device for controlling the spending of taxpayers' dollars. Cash is simple, straightforward, and tangible. In contrast, accrual accounting can be abstract and relatively complex and may be perceived as a device for manipulating the budget. Taxpayers, legislators, special interests, and other participants in the budgetary process are concerned first and foremost with holding public officials accountable for appropriations of taxpayers' cash. Despite many real or alleged faults "the traditional budget reigns supreme virtually everywhere ..." (Wildavsky 1978, p. 501).

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This paper was funded by the ICGFM through a research grant and received an award as the best paper produced under the program by Dr. Adolf J.H. Enthoven, Consortium Vice-President and Chairman of the Research and Education Committee in September 1996.