A CENTURY OF ACCRUAL ACCOUNTING RULES:
Reflections on the American Experiment

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Dedication

This article and related presentation are dedicated to 95-year-old Professor Hiroshi Yoshida 吉田　寛, a charter member of the CIGAR Network, and to the memory of Professor Yuji Ijiri 井尻雄士, the first Asian-born president of the American Accounting Association.

Introduction

This article was presented at a keynote speech at the first Asian Government Accounting Symposium held in Tokyo, Japanese on June 29-30. While the style remains largely the same, data sources and references are now provided in two appendices for interested readers.

As an Asian American, I appreciated the invitation to address the symposium to share my observations about American government accounting, to which I devoted my entire professional career. I offered to speak on a century of American experience with accrual accounting rules in government in part to correct the misimpression that accrual accounting is new to government.

I shall first set forth my understanding of accrual accounting. I will then show how accrual concepts are incorporated in the accounting and financial reporting standards and practices of American government in all three levels: federal, as well as state and local. Finally, I offer a few reflections on the role of government accounting in making the world a better place.

Understanding Accrual Accounting

Accrual accounting in government is broader than accrual basis used in business accounting. In business, the accrual basis – as distinguished from the cash basis – of accounting means that a seller cannot recognize revenue – and match related expense to arrive at a period's income or loss – until and unless goods are delivered or services are rendered. This is sometimes called the "full" accrual basis accounting. It is often taken for granted – and unmentioned – is that the balance sheet of a business reports a full range of its assets and liabilities, including capital assets and long-term liabilities. That is, a business balance sheet has a broad measurement focus.

Accrual accounting in government explicitly encompasses a broad measurement focus for the balance sheet and an accrual basis for the operating statement. Opinions differ as to what assets and liabilities to admit onto the balance sheet, and how to deal with nature of public goods. Namely, it is difficult or excessively costly to measure certain government services in order to identify their recipients and charge them for their amounts of consumption. This situation creates great difficulties in using service effort and accomplishment as a general basis for recognizing revenue. Also due to the cumulative nature of assets and liabilities, and the complex nature of public resources and obligations, it is challenging for governments to construct inclusive, meaningful and accurate balance sheets. Consequently, American governments have modified both the accrual basis and breadth of the balance sheet.

The modification is intended to take into account the availability of resources, specifically financial resources. Unfortunately, the extent of modification is often not made clear. I have therefore proposed the notion of degrees of accrual to clarify and refine modified accrual and guide the gradual and symmetrical construction of a balance sheet with a progressively broader measurement focus. Specifically, there is the mild degree of accrual to show the availability of current financial resources, offset by current liabilities. Then, there is the moderate degree of accrual to show the availability of financial resources (both current and long-term), offset by liabilities (also both current and long-term). And finally, there is the strong degree to show the availability of all resources (both financial and capital assets) offset by all liabilities.

At this point, I should perhaps pause to point out that differences between "cash basis" and "cash flow". The cash basis of accounting uses cash receipt and cash disbursement as the point of recognition for revenue and expense, respectively. The cash basis and the accrual basis are mutually exclusive alternatives for recognizing revenue and expense. Cash, arguably the most critical asset of any organization, is monitored continuously and the amounts of cash position and cash inflows and outflows are periodically reported in a separate statement to complement the accrual-based balance sheet and operating statement. Of these two statements, I personally believe that balance sheet is more fundamental, for two reasons: (1) the flow measures are derived from the stock measures: revenues are increases in assets or decreases in liabilities, and expenses are decreases in assets and increases in liabilities; (2) the balance sheet permanently preserves memories of the future consequences of past actions.

I am belaboring this obvious point because the International Public Sector Accounting Standards (IPSAS) Board allows the co-existence of so-called cash-basis IPSAS while promoting accrual-basis IPSAS. This way of standard-setting is a misguided because all governments – especially those in poor countries – need to know their obligations and the resources to meet them. In general, so long as a government owns or control economic resources and shoulder financial obligations, accrual accounting is a necessity, not a luxury.

I now turn to the United States, where federalism results in the existence of two separate standard-setting institutions for the federal government and the state and local government sector.

Federal Government

As a consequence of applying accrual accounting rules, the United States Government has reported an abysmal financial position in its consolidated balance sheet. Specifically, as of the end of fiscal year 2021 (ended on Sept. 30, 2021), it had a negative $30 trillion in net financial position, due to excess of almost $35 trillion in total liabilities, over only almost $5 trillion in total assets. In other words, the liabilities were over seven times the assets. Included in the liabilities were Treasury bonds and notes; these alone amounted to 134% of GDP, the highest since the end of World War II.

To be eligible for reporting in the federal government's balance sheets, economic resources and financial responsibilities have to belong to the United States Government and meet the criteria of accounting recognition and be measurable in terms of money, leading to the following exclusions:

- Federal Reserve Banks' almost $9 trillion in total assets and total liabilities;
- Between $71 to $94 trillion for social insurance in terms of the total present value of future expenditures in excess of future revenues projected over 75 years, depending on the definition of who is included;
- Almost $333 trillion of future tax and other receipts in terms of present value of 75-year projections;
- Unstated dollar amounts of stewardship property, plant and equipment in the care of federal agencies;
- Unstated dollar amount of commitments and contingencies.

The U.S. Treasury gave the following justifications for not reporting these items in the consolidated balance sheets:

- Federal Reserve Banks is not in "The U.S. Government" reporting entity due to the central bank's policy independence and not being financed by the federal budget.
- Social insurance (mainly public pension and health care for the elderly) is financed by payroll taxes; though unlikely, Congress can still repeal or reduce benefits. (Now only the amounts currently due and payable are reported as a liability.)
- Future tax and other receipts are not receivable because the government has not exercised its power to tax. (Estimated income tax is collected quarterly.)
- For stewardship land and cultural heritage artifacts, their economic value is either impossible to reliably estimate or is not meaningful.
- Finally, commitments: purchase orders are not a liability before benefits are received; contingencies have to be reasonably probable to be estimated.

These large exclusions are the result of implementing the rules for accounting recognition and measurement for accrual-based financial statements. The rules are the Federal Financial Accounting Standards (FFAS), set by the Federal Accounting Standards Advisory Board (FASAB). The FASAB was established in 1990 and is sponsored by the Government Accountability Office (GAO) in the legislative branch, and the Office of Management and Budget (OMB) and the Department of the Treasury in the executive branch. The FFAS are recognized by the American Institute of Certified Public Accountants (AICPA) as Generally Accepted Accounting Principles (GAAP) applicable to the Federal Government after FASAB's independence was enhanced and other changes were made in 1999.

I call your attention to the adjective "financial" in Federal Financial Accounting Standards (FFAS). Here "financial" refers to both the historical nature of the information and being measurable in terms of money. The term is there because FASAB standards do not cover special purpose financial reports (such as those of the trustees of the social security trust funds), cost accounting reports, budget preparation and budget execution reports. In addition to the "standards", FFAS encompass also the statements of concepts, interpretations, and other guidance produced by the FASAB and its Accounting and Auditing Policy Committee. Collectively, these FFAS pronouncements guide the Treasury's preparation of accrual-based consolidated financial statements (CFS) of the U.S. Government as a whole and its agencies.

These general purpose financial statements are intended to fairly present the financial condition and performance of the U.S. Government. These consolidated financial statements with their titles in official terminology are presented sequentially below:

- Statement of Net Cost
- Statement of Operations and Changes in Ne Position
- Reconciliation of Net Operating Cost and Budget Deficit
- Statement of Changes in Cash Balance from Budget and Other Activities
- Balance Sheets
- Sustainability Financial Statements:
- Statement of Long-term Fiscal Projections
- Statement of Social Insurance and Changes in Social Insurance Amounts.

I think it is easier to make sense of them by re-arranging them and expressing their titles in generic terms. I would first present the balance sheet because it captures the cumulative financial consequences of past transactions and events subject to recognition and measurability limitations. This long-term perspective is in contrast to the annual perspective of the operating statement, which in the federal government is presented in two sections: a statement of total expenses offset by earned revenue to show the amount financed by taxes; and a statement of tax revenues and tax-financed expenses, the difference is accrued deficit, which worsened the cumulative net financial position. These accrual-based statements are complemented by a cash flow and position statement.

These familiar financial statements are followed by two schedules unique to the federal government (I personally prefer to call these "schedules" because they use a different measurement methodology and are not articulated with the first three conventional financial statements):

The first schedule explains the difference between accrual deficit and cash deficit. For FY 2021, the accrual-basis deficit was $3,095 billion, in contrast to the cash-basis deficit of $2,776 billion, a *net* increase of $319 billion. (Incidentally, the cash deficit amounted to 15% of GDP, also the highest since the end of World War II). This increase was mainly due to an increase of $1,061 billion in expense not requiring cash outlay, offset by $363 billion in cash outlays capitalized as assets.

Finally, the two sustainability schedules are intended to address the limitations of the balance sheet imposed by the current accounting recognition criteria. We observed earlier the grossly imbalanced balance sheet of the U.S. Government. A major reason is that future tax revenues are not recognized as receivable. The long-term fiscal projection schedule provides information about the sources of financing future spending (other than for interest) and for liquidating recognized liabilities. The future solvency problem of social insurance is the subject of the second long-term projection.

Since the balance sheet functions as the long-term memory of a government's finances, I shall highlight a few relatively large line items in the balance sheet at the end of FY 2021. You may recall again that the U.S. Government had total assets of almost $5 trillion in comparison to almost $35 trillion in total liabilities. About 1/3 of the total assets were loans receivable and about ¼ were general property, plant and equipment. Cash and other monetary assets amounted to a mere 10% of the total assets. Two major items made up 93% of the total liabilities. They were the over $22 trillion of federal debt and interest payable, and another $10 trillion of pension and other benefits owed to employees including retired military personnel. I might add the high level of federal debt resulted in interest expense of $371 billion, almost half of the expense of the Department of Defense in FY 2021. Finally, the negative $30 trillion of net financial position of negative $30 trillion resulted from a negative $33 trillion in the general fund financed by income taxes, offset by a positive $3 trillion in the funds from dedicated collections (mainly payroll taxes for social security).

It is not difficult to see why the U.S. Government is in such a deep fiscal hole. After all, the United States was engaged in a long Cold War for several decades and several costly hot wars overseas after World War II. Domestically, the federal government has become a rescuer of the economy and a virtual ATM (automatic teller machine) for many eligible Americans. Furthermore, the American people were unwilling to pay more taxes and all too ready to borrow from foreigner creditors, including Japan and China.

For a deeper understanding of federal accounting, one would have to examine the accrual accounting standards themselves. Briefly the FASAB has to-date (summer of 2022) issued 59 standards. Some complex and controversial topics subject to multiple standards; for example:

- There are as many as 13 standards on general property, plant and equipment.
- Four standards on each of these topics: (a) stewardship property, plant and equipment; (2) social insurance; (3) taxes ("non-exchange revenue"), and dedicated (revenue) collections; (4) revenues in general.
- Three standards on each of these topics: (a) loans receivable; (b) loan guarantee, insurance and guarantee programs.

It is easier for the FASAB to pronounce standards than for the federal agencies and the Treasury Department to build robust accounting and internal control systems to produce reliable numbers. Even though the GAO as early as 1997 began auditing the CFS of the US Government, it declined to issue an audit opinion ever since, up to and including FY 2021, mainly due to internal control problems at the Pentagon.

In a historical sense, the FASAB itself was an institutional experiment in legislative and administrative cooperation. It was created after Congress had passed the 1990 Chief Financial Officers Act. This act requires 24 federal agencies to prepare financial statements according to "applicable" standards, which were later set by the FASAB. From these agency-level consolidated financial statements, the U.S. Treasury Department prepares the whole-government consolidated financial statements as we now know them. Actually, the Treasury had been preparing prototype consolidated financial statements ever since 1975, when Arthur Andersen & Co. prepared the first-ever accrual-based CFS for the US Government. The twin concepts of accrual and consolidation were consistent with progressive thinking in federal budgeting and financial management in the 1950s and 1960s.

These reform measures could be traced further back at least for 100 years to the 1921 Budget and Accounting Act. This act requires information about debt level and "financial conditions of the government" in addition to other information in the budget submitted by the President. Even earlier in 1802, President Thomas Jefferson regarded the simplification of federal accounts "an object of great importance". Apparently, he thought the Treasury's reports were too complicated. The 1787 Constitution of the United States requires "a statement of receipts and expenditures be published from time to time", immediately following the prohibition of withdrawing money from the Treasury without Congressional appropriation. It is noteworthy that accounting and budgeting were accorded equal importance by the Constitution.

I have devoted quite some time to federal accounting and financial reporting, in part because it has received little attention in the academic literature, and in teaching and research. This is unfortunate, because the issues are intellectually interesting and are practically important due to the U.S. Government's domestic and global significance especially in political and economic crises. I encourage you to access the website of the U.S. Treasury Department for a detailed examination of the financial statements discussed here as well as other fiscal documents, and the website of the FASAB for the full texts of all the federal accounting standards and concepts (see Appendix 1).

Next, I turn to state and local governments, which greatly affect the daily lives of the American people.

State and local governments

Under the American system of federalism, the Federal Government and each of the 50 States have separate fiscal systems, with States overseeing their 80,000 local governments. Consequently, the two levels have different governance structures for setting and implementing accounting standards. This has resulted in parallel developments toward accrual at varying speeds and with different starting points.

Over 100 years ago during the Progressive Era of American history, a 1901 the book *Municipal Accounting* advocated “a clear and correct balance sheet” to show the present value, and the annual growth or decline of capital. The 1913 *Metz Fund Handbook of [New York] City Business Methods* emphasized the role of the balance sheet in gauging a government’s ability to operate as a going concern, and also fund accounting and budgetary control. In the succeeding five decades, an alliance of professional accountants and auditors in and out of government worked on accounting in support of systematic financial management in good and bad economic times.

Their practical experiences culminated in the remarkable 1968 book called “GAAFR”. “GAAFR” stands for *Governmental Accounting, Auditing, and Financial Reporting*. The original edition contained 13 principles. Among them is Principle 10 on the basis of accounting. It requires the accrual basis for some funds and the modified accrual basis for others. With few exceptions, modified accrual means expenditures are recorded when liabilities are incurred, and revenues are recorded when received in cash. It also recommended two “account groups” to be used to record and report general fixed assets and general long-term debt; these belong to the government as a whole and not specific funds. Thus began the long-running issues of defining and modifying the accrual basis.

In the wake of the municipal financial crises in the mid-1970s, under pressure to improve government accounting, the National Council on Government Accounting produced Statement 1 to update and mostly reaffirm the 1968 GAAFR. However, this document emphasized the equal importance of following Generally Accepted Accounting Principles (GAAP) and complying with finance laws. It also introduced terminology that remains in common use today: General purpose financial statements (GPFS), Generally Accepted Accounting Principles (GAAP), and Comprehensive Annual Financial Report (CAFR). I should point out that these financial statements only combined fund statements without eliminating the effects of internal transactions. As to the task of producing financial data for the general government sector of the economy, the accounting profession has left it to economists and statisticians concerned with national accounts.

Then, in 1984, the Governmental Accounting Standards Board (GASB) succeeded the NCGA in setting standards for state and local governments. GASB standards were recognized by the American Institute of CPAs in 1989 as GAAP applicable to state and local governments.

In the past almost 40 years, the GASB produced 99 standards, too many for me to even list them. I shall only highlight the general standards on accrual accounting.

In 1990, the GASB issued Standard No. 11 on measurement focus and basis of accounting, affecting specifically governmental funds' operating statements. As a rationale for the modified accrual basis, the standard introduced the concept of inter-period equity (IPE), that is, "whether current-year revenues were sufficient to pay for current-year services." It required revenue be recognized on the basis of legally enforceable claims, which was distinctive from either service delivery or resource availability. Unfortunately, GASB Standard No. 11 faced the problems of incremental standard setting. First, it stayed within a fund structure by covering only governmental funds and then narrowly their operating statements – without dealing with the balance sheet. The standard therefore did not differentiate current and long-term financial resources, and between financial resources and economic resources. In other words, inter-period equity fell short of longer-term inter-generational equity. Concern about the potential impact of presenting an unfavorable financial picture led to serious opposition by government financial officials. This forced the deferral of effective dates, and eventually the standard was withdrawn.

Another 10 years would pass before by another general standard would be issued to deal with the matter of accrual. In 1998 GASB Standard No. 33 on non-exchange transactions, namely taxes and grants. This time, the GASB dealt with the simultaneous effects of non-exchange transactions on the balance sheet and the operating statement. Recognition of taxes and grants receivable is based on legally enforceable claim. However, Standard No. 33 allows revenue recognition on either the accrual basis, that is, legally enforceable claim; or the modified accrual basis, that is, resource availability.

In coordination with Standard No. 33, in 1999 the GASB issued Standard No. 34 to restructure the financial reporting model by requiring basic financial statements to be preceded by a Management Discussion and Analysis (MD&A). The basic financial statements consist of a suite of new government-wide financial statements, with separate sections for governmental activities and business activities, before presenting government-wide totals; as well as old fund financial statements, although these were now rearranged to stress major funds.

The GASB has asserted that with Standard No. 34 "… for the first time the annual report will also include new government-wide financial statements, prepared using accrual accounting for all of the government's activities. … It measures not just current assets and liabilities but also long-term assets and liabilities … It also reports *all* revenues and *all* costs of providing services each year, not just those received or paid in the current year or soon after year-end." In relation to the earlier efforts at accrual accounting, GASB Standard No. 34 was the last significant milestone on this 100-year long journey. However, it still fell short of "full" accrual based on service delivery. I personally think that the claim of reporting "*all* revenue and *all* costs" was a bit exaggerated.

As American state and local governments vary in their extents of implementing accrual accounting through the adoption of GASB standards, Appendix 1 lists the website of the State of Illinois and the City of Chicago for you to see their CAFRs even though they may not be representative. The website of the GASB reports current developments and summaries of its standards.

Reflections

The American experience with accrual accounting shows that it is a never-ending process of experimentation. The expression “doing better, but feeling worse” sums up the current state of affairs. That is, judging by the number of standards, the amount of money spent on system development, and the volume of disclosure over time, American governments are doing better accounting. But, alas, accrual accounting has revealed worsening fiscal prospects of American government at all levels.

As the philosopher George Santayana put it: “Those who cannot learn from history are doomed to repeat it.” Unfortunately, while history may tell us what not to do, it does not, however, tell us what to do as circumstances may have changed. Therein lies the limitations of financial accounting and reporting with its mostly historical perspective. Therefore, Herbert A. Simon, Yuji Ijiri’s mentor, counseled accountants to direct the managers’ attention to problems and to help solve them, besides keeping accurate scores.

Indeed, several generations of American accountants did that with government throughout the 20th century. During the Progressive Era in the first two decades, accountants and finance specialists had extensive civic engagements. In Chicago, Haskins and Sells found problems and were hired to solve them. In Philadelphia, Lybrand recommended comprehensive annual reports. In New York City, Frederick Cleveland in partnership with City Comptroller Metz to institute business methods. Half a century later, after the mid-1970s municipal financial crises, accounting firms offered solutions, e.g., Ernst & Whinney said, improving financial reporting; Coopers & Lybrand said, expanding scope of government auditing. Several groups of academics also make recommendations, and contemporary American government accounting research began a period of renaissance.

Also in the mid-1970s, the accounting firm Arthur Andersen & Co. did something unprecedented. A team headed by Charles A. Bowsher prepared the first set of accrual-based consolidated financial statements for the US Government, as a pro-bono public service. (I should point out that both the Federal Reserve and Social Security were included in the consolidation.) The firm was also engaged to help dealing with fiscal problems in New York. And Mr. Bowsher, who later became U.S. Comptroller General, was a steadfast supporter of federal budget and financial management reforms.

Personally, I started my career at this auspicious time. While I was an interested but detached academic observer of the reforms, I also wished to follow the footsteps of these earlier pioneers in public service. I was privileged to be a participant, as staff and consultant, in the standard-setting process at both the federal and state/local levels in the United States.

Internationally, I joined Messrs. Klaus Lueder and Rowan Jones in founding the CIGAR Network in 1987 to promote international comparative research. This led to many opportunities of teaching, research and consulting around the world.

As I look back now on the American experiment in the international context, I could not help but wonder about what more could have been done or done better. For example:

- After setting almost 160 standards, has standard setting by the FASAB and GASB reached a point of diminishing marginal returns?
- Could a body of American government accounting and financial reporting principles be formulated for international comparison?
- In view of its limitations, what should be done to reconcile or even integrate financial accounting rules with requirements for:
  - Budgeting and budgetary accounting,
  - Cost and management accounting, and
  - Compiling government finance statistics and national economic accounts?
- How could we as an international community of educators develop a common body of knowledge of government accounting to pass to future generations?

Finally, I leave you with a bold assertion by Chinese accounting professor Yang Shizhan 杨时展 about the role of accounting (and auditing) in the society and economy: 天下欲治计先治，天下未乱计先乱. That is, "If you wish to govern the world, first get the accounting right, because disorderly accounting precedes chaos in the world." In the spirit of inquiry, I urge you to regard it as a hypothesis and test its validity in your own country, as I have tried to do with the United States of America.

Appendix 1. Information Sources

Further information about American government accounting and financial reporting:

- Standard-setting boards: FASAB: https://fasab.gov; GASB: https://www.gasb.org
- U.S. Government Consolidated Financial Statements and other financial reports: https://www.fiscal.treasury.gov/reports-statements/financial-report/financial-statements.html

Selected state and local govt. financial statements and reports:

- State of Illinois: https://illinoiscomptroller.gov/financial-data/find-a-report/comprehensive-reporting/annual-comprehensive-financial-report/
- City of Chicago: https://www.chicago.gov/city/en/depts/fin/supp_info/comprehensive_annualfinancialstatements.html

Appendix 2. References

1. Chan, J.L., "Government Accounting: An Assessment of Theory, Purposes and Standards," Public Money and Management, Vol. 23, Issue 1 (January, 2003), pp. 13-20.
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3. Chan, J.L., *American Government Accounting Standards and Their Relevance to China*, bilingual edition in English and Chinese, translation by Suihong Chen and Yinghua Shi (Beijing, China: China Finance and Economics Publishing House, 2009).
4. Chan, J.L., "Accounting and Financial Management Reform in the United States Government: An Application of Professor Lüder's Contingency Model," *Perspectives on Performance Measurement and Public Sector Accounting* (Bern, Switzerland: Paul Haupt Publishers, 1994), pp. 17-41.
5. Chan, J.L., "Reforming American Government Accounting in the 20th Century," in *Handbook of Public Management Practice and Reform*, edited by K.T. Liou (NY: Marcel Dekker, Inc., 2000), pp. 97-121.
6. Chan, J.L., "Government Budgeting and Accounting Reform in the United States," in Chinese and English, *Models of Public Budgeting and Accounting Reforms*, OECD Journal on Budgeting, Vol. 2, Supplement 1 (2002), pp. 187-223.

About the Author

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