

The Bases of Accounting for Budgeting and Financial Reporting

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The federal government is bankrupt, declared the Citizens for Budget Reform in its *USA Annual Shareholders' Report* (Fox, 1996, p. 1) on the basis of the following "simple balance sheet math":

$$\begin{aligned} \text{Assets} - \text{Liabilities} &= \text{USA Net Worth} \\ \$22 \text{ trillion} - \$51 \text{ trillion} &= -\$29 \text{ trillion} \end{aligned}$$

Among the reported assets are "hard assets" such as cash and equipment, along with the power to tax and to borrow and above all the power to create money. The reported liabilities include, besides the national debt, \$23 trillion in entitlements.

Because of the way assets and liabilities are defined in the example just presented, professional auditors would not give a clean opinion to these numbers. But the numbers are in the public domain regardless of their validity. If they are not to be given much credence, we might turn to the official numbers put out by the U.S. government itself. Unfortunately the official numbers are also problematic. Table 14.1 shows the summary statistics from the U.S. *Government Annual Report, Fiscal Year 1995* (U.S. Department of the Treasury, 1996b) and the prototype *Consolidated Financial Statements of the U.S. Government, 1995 Prototype* (U.S. Department of the Treasury, 1996a). Were the U.S. government's assets closer to \$1,000 billion or \$100 billion, and were its liabilities closer to \$6 trillion or \$4 trillion? A major source of the differences between these two sets of numbers is the different measurement rules currently used in federal financial reporting.

Table 14.1 U.S. Government Financial Position
at the End of FY95
(in Billions of Dollars).

	Assets	Liabilities	Net Position
CFS	\$1,298	\$5,811	-\$4,513
Annual Report	89	3,674	-3,585
Difference	\$1,209	\$2,137	-928

Source: U.S. Department of the Treasury,
1996a and 1996b

This chapter analyzes the measurement rules (the basis of accounting) used in government financial reporting and budgeting. A framework is developed for analyzing the crucial concept of *accrual*. The chapter suggests that the conventional dichotomy of cash versus accrual is too crude. After contrasting the budgeting and accounting perspectives on the accrual basis, some numerical examples are given to illustrate how the extent of accrual results in different numbers in financial statements and budgets. This is followed by a description of the extent to which the accrual basis is required by governmental accounting policy boards. Finally, the implications of the accrual basis for budgets are examined.

DEGREES OF ACCRUAL

Basis of accounting refers to the measurement rules that instruct accountants and budget scorekeepers about ways to deal with the effects of an entity's transactions or events. Accountants typically frame the issue in terms of the *timing* of registering the effects of those transactions or events. Accordingly, there are two primary bases of accounting: the *accrual basis* and the *cash basis*. The cash basis records the transactions or events "when cash is received or paid"; the accrual basis recognizes those effects "when the transactions or events place," according to the Governmental Accounting Standards Board (Governmental Accounting Standards Board, 1996b, para. 3b). Actually, accrual is not merely a matter of timing; it involves the complex issue of tracing the deli financial effects of budgetary decisions and related actions. Unfortunately, discussions about accrual are often complicated by the different approaches use by budgeting and accounting professionals in interpreting those effects.

Budgeting and Accounting Perspectives

Budget analysts tend to assume a periodic operational perspective while accountants are trained to think about financial position in a double-entry framework. Budget discussions often seem fixated on the effects of decisions on the deficit—the excess of financial resource outflows over inflows during a period. Accountants also deal with such *flow measures*, but they are equally concerned about the balance sheet and the relationship between resources and debts— stock measures—at some points in time, most notably at the end of a fiscal year.

There are several other differences between budget and accounting analyses. First, budgeting is oriented to the future while accounting looks backward. Both time perspectives are necessary because government requires both planning and feedback based on actual performance. Whereas a budget makes promises, financial statements report whether those promises were kept. These roles give rise to the complementary and yet competitive relationship between accounting and budgeting.

Second, budgeting tends to focus on discrete periods while accounting is concerned with the continuous carryover effects from one period to the next. Politicians and the public alike focus on the bottom line of a budget—the annual deficit figure. Under the cash basis, the budget deficit for year $t+1$ is the projected deficiency of cash receipts to finance the cash outlays:

Equation 1

$$\text{Deficit}_{(t+1)} = \text{Outlays}_{(t+1)} - \text{Receipts}_{(t+1)}$$

To the extent that not all purchases for goods and services were paid for and not all revenues were collected during the year in question, there would be carryovers in the form of payables (a liability) and receivables (an asset,) that would require reporting in the balance sheet at year's end. The issues surrounding the accrual basis turn on the question of what to do with these inter-period effects.

Placing the deficit on an accrual basis would require recognition of the stock measures, that is, payables and receivables, as follows:

Equation 2

$$\text{Deficit}_{(t+1)} = [\text{Outlays}_{(t+1)} + \Delta\text{Payables}_{(t+1)}] - [\text{Receipts}_{(t+1)} + \Delta\text{Receivables}_{(t+1)}]$$

The delta in $\Delta\text{Payables}_{(t+1)}$ and in $\Delta\text{Receivables}_{(t+1)}$ refers to change during the year (t + 1). A comparison of the one-period budget model in Equation 1 and the accounting model in Equation 2 shows that the carryover effects are implicitly dealt with by accrual accounting but ignored by cash budgeting. To confusion, the term *expenditure* has not been used. The budget literature, implicitly using the cash basis, often equates outlays with expenditures and refers to $\Delta\text{Payables}_{(t+1)}$ as *accrued expenditures*. Accounting, conversely, would regard the whole amount $[\text{Outlays}_{(t+1)} + \Delta\text{Payables}_{(t+1)}]$ as an expenditure by assuming an accrual basis of accounting. On the revenue side, formally recognizing receivables can give rise to extremely complex conceptual, measurement, and procedural problems.

Besides the cash and accrual bases, there exist also the *budgetary bases* of accounting. One of these bases may be called the *cash plus obligations basis* and the other may be called the *expenditure plus obligations basis*. Both were conceived to gauge the extent to which appropriations have been spent. At this point we need to distinguish between obligations and liabilities. *Obligations* are rooted in appropriations. An *appropriation* is legal authorization to spend—that is, to incur obligations, or legally binding contractual promises, that would immediately or eventually lead to cash outlays (U.S. General Accounting Office, 1993, pp. 61-62). As evidenced by contracts or orders for goods or services, obligations reduce the amount of appropriation available for future spending. Thus, at the end of fiscal year (t + 1):

Equation 3

$$\text{Available Balance of Appropriation}_{(t+1)} = \text{Appropriation}_{(t+1)} - [\text{Outlays}_{(t+1)} + \text{Obligations}_{(t+1)}]$$

This method of budget calculation, however, overlooks the possible existence of obligations that have become liabilities, confirmed by the receipt of goods and services, a matter of considerable interest to accountants. Thus there arises the expenditure-plus-obligations budgetary basis, which would modify Equation 3 as follows:

Equation 4

$$\text{Available Balance of Appropriation}_{(t+1)} = \text{Appropriation}_{(t+1)} - [\text{Outlays}_{(t+1)} + \Delta\text{Payables}_{(t+1)} + \text{Obligations}_{(t+1)}]$$

It is hoped that the sample equations just presented illustrate the point that financial numbers are virtually meaningless unless we know the measurement rules behind them. Often the terminology is not consistent and the rules are ambiguous, particularly to those trained in another specialty. The next section explains the accountant's mind-set.

Accounting Equation

The accountant's view of the world is encapsulated in the *accounting equation*:

Equation 5

$$\text{Assets}_{(t+1)} = \text{Liabilities}_{(t+1)} + \text{Net Assets}_{(t+1)}$$

The accounting equation is the conceptual model used by accounting to analyze transactions. Such an analysis provides numbers that are subsequently recorded and summarized and eventually reported in financial statements. The accounting process need not concern us here. What is important is that Equation 5 states that an entity's economic resources at a point in time—such as the end of period $t+1$ —are either borrowed or owned by the entity itself. Net assets are variously called the *owner's equity* or *stockholders' equity* in a business, or the *fund balance* in the governmental and nonprofit context.

Alternatively, the accounting equation may be rewritten as follows:

Equation 6

$$\text{Assets}_{(t+1)} - \text{Liabilities}_{(t+1)} = \text{Net Assets}_{(t+1)}$$

This formulation puts the emphasis on *net assets*, or the residual. An entity is solvent if its net assets have a positive number, that is, when its assets exceed its liabilities. In contrast, if liabilities exceed assets, the net assets number is negative. Regardless of the presentation, it is quite obvious that the balance sheet emphasis influences the accounting perspective, so much so that the statement describing the results of operations of a period is sometimes viewed as representing changes in financial position.

At this point we can go no further without resolving the issue of what are assets and liabilities, that is the *measurement focus* of the balance sheet.

Measurement Focus

The measurement focus characterizes how broadly the concepts of assets and liabilities are construed. As explained earlier, the cash basis of accounting measures the results of operations in terms of the receipts and disbursements of cash. The accrual basis, in contrast, adopts a broader view of assets and takes liabilities into account as well. But how broadly?

An entity's *assets* are the economic resources that are capable of providing measurable future benefits. They include resources the entity owns as well as resources over which it has effective operating control, such as capital equipment financed by debt. Benefits are operationalized as future net cash inflows (as in the case of receivables) or as the reduction of future net cash outflows (as in the case of prepayments for services). The "measurable" qualification would rule out the accounting recognition of resources that produce benefits for which accountants have not developed acceptably precise and reliable measures. Furthermore, the transaction or event that establishes the entity's claim or control over the resource should have occurred. This requirement contrasts with the economist's approach of stating asset value in terms of the present value of future benefits.

Accounting policies interpret these basic criteria, resulting in the inclusion of some economic resources as assets and the exclusion of others. This filtering process is called *accounting recognition*, which is analogous to the legal concept of admissible evidence.

There is considerable subjectivity in applying the basic recognition criteria. Consider research and development (R&D) as an example. Under the rules of the Financial Accounting Standards Board (FASB), a business cannot regard any of its R&D spending as an asset. But an experimental balance sheet depicting national wealth includes federal R&D spending as an asset (U.S. Office of Management and Budget, 1996b, p. 27). Similarly, by using the recognition criteria embodied in current generally accepted accounting principles, most accountants would leave investment in human capital, as measured by educational expenditures, off the balance sheet. Nor would they consider projected receipts, tax base, or the power to tax as assets.

After the assets are recognized, they can be classified as either financial resources or nonfinancial resources (See Figure 14.1). A *financial resource* is a claim against others' assets (such as receivables) or services (such as prepaid insurance). The timing of claims further separates financial resources into *current financial resources*, convertible into cash within one year, and *noncurrent financial resources*. Capital assets (such as buildings and equipment) are considered to be *nonfinancial resources* if they are held for future use.

Liabilities require measurable future economic sacrifices in terms of cash outflows or service delivery. Liabilities are usually classified as *current* (due within one year) and *noncurrent* or *long-term* on the basis of their maturity (see Figure 14.1). It is generally easier to identify liabilities because they are usually evidenced by or traced to past events or contracts. That is usually the case in the private sector and in commercial transactions involving government. The line, however, between a government's legal obligations and its social or moral responsibilities is often blurred. In the case of federal social insurance programs, even the government's legal obligations are debatable. Nevertheless, few accountants would take the resource requirements or national needs and discount them to arrive at a liability measure. For accountants, the starting point is a past event, from which they trace forward consequences that will require future costs.

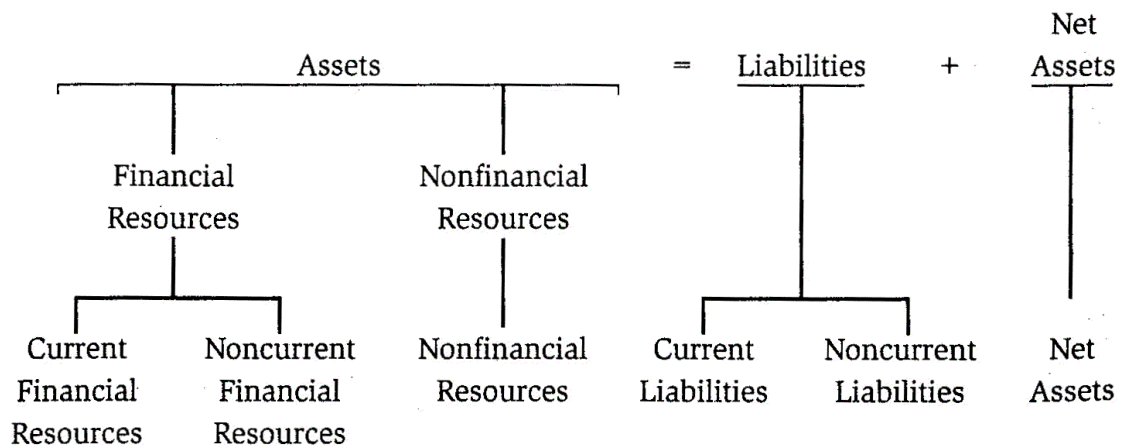


Figure 14.1. Measurement Focus

Degree of Accrual

The degree of accrual is determined by the range of assets and liabilities encompassed in constructing revenue and spending measures. The expansion or contraction of the

accounting measurement focus makes accrual an elastic concept. For example, accrual can be stretched to a breaking point by including educational capital as an asset and moral responsibility as a liability. These are extreme interpretations, however. In practice, judicious adjustments of the scope of assets and liabilities results in more refined measures of accrual.

Currently, government accounting distinguishes between full accrual and modified accrual. Upon closer examination, the modified accrual concept is ambiguous because the modification may be so mild that it resembles modified cash; conversely, the modification can be so extensive that it may amount to almost full accrual. Thus it is proposed that the ambiguous modified accrual basis be separated into two categories: the *weak* form and the *semistrong* form. This will lead to more rigorous definition and precise measures of revenue and spending.

Revenue Recognition

In terms of Equation 6, revenues are gross changes in net assets. The best accounting standards do not permit the use of the cash basis in recognizing revenue. Specifically, borrowed cash results not in revenue but in a liability. This may sound like a truism but bond proceeds are often included in government budgets as a part of the money available to finance operations. This practice runs the risk of blurring the distinction between borrowing and raising revenues through exercising the government's taxing authority or by providing goods and services. These activities often result in increased assets. The cash basis would regard cash receipts as revenues. The weak modified accrual basis would include cash and current financial resources as revenues. This is equivalent to what is called the modified accrual basis in the current government literature, which uses the "measurable and available" criteria. The semistrong modified accrual basis would include noncurrent financial resources as well. The full accrual basis of revenue recognition goes beyond the resource availability concern; it addresses the fundamental political and social relationship between the government and the public.

Accruing revenue may rest on legal grounds: a government can recognize revenues as soon as it acquires a legal claim on the taxpayer's resources. The moment a taxable transaction takes place, the government is entitled to whatever taxes or fees are due to it under existing laws. The second type of full accruals would treat governments like a business: no service, no revenue. In other words, governments would not be allowed to claim credit for revenues until and unless they have earned them. No revenue would be recognized until and unless governments have sold the goods or provided the services; cash received in advance of delivery or sale of goods gives rise to a liability, that is, revenue is deferred. This may sound like a rather radical idea, but it is consistent with the theory behind the current emphasis on service efforts and accomplishment in state and local governments and in the federal government's Government Performance and Results Act of 1993. Needless to say, many theoretical and practical problems remain to be solved if either level of the full accrual basis is to be implemented. The purpose here is to raise the possibilities and not to deal with implementation issues. Indeed, the terminology does not even exist to describe the various types of accrued revenues.

Spending Measure Recognition

Spending reduces net assets. The terms *cash outlays* or *disbursements* seem to adequately describe spending on the cash basis. Beyond that, the technical vocabulary is rich but ambiguous. The terms *expenditures* and *expenses* are often used interchangeably, but they really should not be. The term *expenditures* is associated with the modified accrual basis of accounting. Because expenditures, as changes in net assets, are defined in terms of assets and liabilities, the types of assets and liabilities shown in Figure 14.1 will affect the definition of expenditures. Specifically, the decreases in current financial resources as well as increases in current liabilities give rise to *expenditures I*—a weak modified accrual concept. Spending that reduces noncurrent financial resources or creates long-term liabilities may then be called *expenditure II*—a semistrong modified accrual concept. When the term *expenditure* appears in the government accounting literature, it typically refers to what we call expenditure I. The designation expenditure II can accommodate the trend toward the recognition of more and longer-term liabilities. Finally, the full accrual basis uses the concept of *expenses*, which can include the cost of nonfinancial assets used in producing goods or services, depreciation being a prime example.

Having analyzed revenue and spending measures in considerable depth it is time to relate these variables of financial operations to financial positions expressed in the form of the accounting equation. Recall Equation 6:

$$\text{Assets}_{(t+1)} - \text{Liabilities}_{(t+1)} = \text{Net Assets}_{(t+1)}$$

This section has discussed revenues, expenditures, and expenses in terms of assets and liabilities as follows:

$$\text{Assets}_{(t)} - \text{Liabilities}_{(t)} = \text{Net Assets}_{(t)}$$

Equation 7

$$+ \quad - \quad + \quad \text{Revenues}_{(t+1)}$$

Equation 8

$$- \quad + \quad - \quad \text{Expenses/Expenditures}_{(t+1)}$$

resulting in

Equation 9

$$\text{Assets}_{(t+1)} - \text{Liabilities}_{(t+1)} = \text{Net Assets}_{(t+1)}$$

In this way, the operating statement as symbolized by Equations 7 and 8 may be viewed as a bridge between two successive balance sheets depicted by Equations 6 and 9. Similarly, a budget, which projects resource inflows and outflows, links two pro forma statements of financial position. The financial accounting model is therefore more complete than the budget model in that it embodies both flows and stock measures. In comparison with the typical one-period budget model, the accounting model continuously traces the changes in assets and liabilities. It is therefore particularly useful in tracking

the future consequences of current operations. As such, it is a necessary and useful complement to the one-period budget model.

ILLUSTRATIONS

Several illustrations of the concepts just presented are now provided. Throughout the examples, C stands for the cash basis, WM stands for weak modified accrual, SM stands for semistrong modified accrual, and F stands for full accrual. All the cases presented are analyzed from the government's perspective.

Case 1

Mr. Policeman worked for the City of Riverside. For FY97, he received \$40,000 in salary and overtime pay, plus \$4,000 in short-term fringe benefits (\$3,000 of which had been received by year's end). In addition, he was entitled to some long-term benefits: \$2,000 of vacation and sick-leave pay, as well as \$6,000 in employer-contributed retirement pension and other postemployment benefits.

Analysis. The headings in Table 14.2 represent the elements of the accounting equation, which we will use to assess Mr. Policeman's impact on Riverside's finances under the four bases of accounting discussed earlier. The cost of Mr. Policeman's service increases from \$43,000 under the C basis to expenditure I of \$44,000 due to the recognition of \$1,000 of short-term liability under the WM accrual basis. Another \$8,000 in long-term liabilities raises the cost to expenditure II of \$52,000 under the SM accrual basis. Because no diminution of capital assets is involved in this case, the full accrual basis is equivalent to the SM accrual basis. It should be noted that the WM basis added \$1,000 in short-term liabilities, and the SM and F bases added another \$8,000 in long-term liabilities to the amount recognized under the C basis. The acknowledgment of this \$8,000 of *operating debt* related to services delivered represents the information value added of accrual accounting.

Table 14.2. Personal Services and Operating Debt.

Basis of Accounting	Cash	+ Current Financial Resources	+ Non-current Financial Resources	+ Non-financial Resources	= Current Liabilities	+ Non-current Liabilities	+ Net Assets
C	-43,000				=		-43,000
WM	-43,000				= 1,000		-44,000
SM	-43,000				= 1,000	8,000	-52,000
F	-43,000				= 1,000	8,000	-52,000

The budgetary implication of this analysis can be seen in attempting the answer to the question, How much should Riverside have levied in taxes to cover the cost of public safety provided by Mr. Policeman? The amounts would similarly range from \$43,000 to \$52,000, depending on the extent to which the city's budget policy required the FY97 taxpayers to bear the cost of Mr. Policeman's service during that period. Cash budgeting would leave a legacy of unfunded liabilities; accrual budgeting might induce higher current taxes to fund both cash payments and some or all of the delayed costs.

Case 2

For FY97, the Department of Transportation of the City of Metropolis received a \$1.10 million appropriation to buy a fleet of twenty trucks: ten trucks of type A at the estimated cost of \$50,000 each and ten trucks of type B at \$60,000 each. Purchase orders were issued during the year. By year's end, four type-A trucks were received and payment of \$200,000 was made. Six type-A trucks costing \$300,000 were also received. Metropolis issued a short-term note of \$40,000 and a long-term note of \$260,000. None of the type-B trucks were received.

Analysis. This case is illustrated in Table 14.3. Again, the net assets column reflects the magnitude of the spending measures under different bases. Under the cash basis, \$200,000 is recognized. The WM basis takes into account the \$40,000 in current payables, thus raising the capital expenditure I to \$260,000. The recognition of another \$260,000 in long-term liabilities under the SM basis boosts the capital expenditure II to \$500,000. As in Case 1, the modified accrual basis increases the visibility of liabilities—a capital debt of \$300,000 in this case. There still exists, however, a major deficiency in the accounting system: there is no recognition on the balance sheet of the fact that the city now has ten trucks. The F basis cures this defect by placing ten type-A trucks on the balance sheet as assets at the cost of \$500,000 total, along with the associated capital debt. The impact of the F basis on net assets is dramatic: compared to the SM basis, the net assets are \$500,000 more, because the expenditures for the ten trucks received are viewed as having increased the city's capital assets. After the trucks are placed into service, the F basis will recognize their depreciation as an expense in the net assets column.

Table 14.3. Capital Spending and Capital Debt.

Basis of Accounting	Cash	+ Current Financial Resources	+ Non-current Financial Resources	+ Non-financial Resources	= Current Liabilities	+ Non-current Liabilities	+ Net Assets
C	-200,000						-200,000
WM	-200,000				+40,000		-240,000
SM	-200,000				+40,000	+260,000	-500,000
F	-200,000			+500,000	+40,000	+260,000	0

The accounting in Table 14.3 is appropriate but the disclosure, even under the F basis, is not complete. Ten type-B trucks still on order are not reported. As explained earlier, financial accounting does not consider undelivered orders as liabilities. It acknowledges their existence by reserving the fund balance (another name for net assets in governmental accounting) for the amount of the orders and offsetting that by reducing the amount of unreserved fund balance. Even though there is no net change in the total fund balance, information on the reserved fund balance would alert users to potential future cash outlays.

In addition to producing data for external reporting, the accounting system of Metropolis should also facilitate the city's budgetary control. Specifically, the accounting system should disclose the fact that the Department of Transportation has exhausted its appropriation for truck purchases by using the expenditure plus obligation budgetary

basis (Equation 4): available balance in the appropriation = \$1,100,000 - \$200,000 + (\$40,000 + \$260,000) + \$600,000 = \$0.

Case 3

In January 1997, the City of Paradise Valley levied various taxes totaling \$1 million for FY97, which ends on December 31, 1997. By the closing date, \$800,000 was collected; another \$150,000 was due by the end of February 1998, with the remainder of \$50,000 due thereafter.

Analysis. The recognition of revenues is recorded in the net assets column of Table 14.4. Under the C basis, the \$800,000 collected is recognized as revenue. The WM basis counts the \$150,000 current receivable as revenue, raising the total revenue to \$950,000. The SM basis adds another \$50,000 of long-term receivables as well, bringing total revenue to \$1 million. There is insufficient information in this case to determine what the amounts of revenue-driven liabilities would be under the F basis.

Table 14.4. Revenue Recognition.

Basis of Accounting	Cash	+ Current Financial Resources	+ Non-current Financial Resources	+ Non-financial Resources	= Current Liabilities	+ Non-current Liabilities	+ Net Assets
C	+800,000						+800,000
WM	+800,000	+150,000					+950,000
SM	+800,000	+150,000	+50,000				+1,000,000
F	+800,000	+150,000	+50,000		?	?	?

Accrual is an elastic two-edged sword: the more it is stretched, the more longer-term assets are recognized, but also the more longer-term liabilities are recognized. Whereas budgeting tends to focus on outlays and obligations for control purposes, financial statements based on the accounting model present a more complete framework that encompasses both flow and stock measures, and a broader range of assets and liabilities. Departing from the cash basis, one could modify the accrual basis weakly to include revenues and expenditures that have short-term financial implications, or one could modify the accrual basis strongly and expand the range of assets and liabilities being considered to include long-term items. The extent to which accrual should be extended is a policy question. The next two sections examine the extent to which accounting standards boards have sought to apply accrual to government.

STATE AND LOCAL GOVERNMENT ACCOUNTING STANDARDS

Since 1984, the Governmental Accounting Standards Board (GASB) has been responsible for setting generally accepted accounting principles (GAAP) for state and local governments in the United States. These principles determine the form and content of general-purpose external financial reports that serve primarily the general public, governing boards and oversight bodies, and investors and creditors. This section focuses on the key measurement rules embodied in the GASB standards issued to date (Governmental Accounting Standards Board, 1996a).

Current Policy

The GASB requires state and local governments to use the full accrual basis to account for their commercial activities. For activities financed by government funds—the general fund, special revenue funds, capital projects funds, and debt service funds—the board prohibits the cash basis and has to date generally endorsed only what in this chapter has been called the weak modified accrual basis. Accordingly, expenditures are cash outlays and increases in short-term liabilities attributable to services received. Revenues claimed through the exercise of governmental power are conceptually recognizable when the government's claim is established (such as when a taxable transaction occurs). Current standards, however, call for recognition to the extent that such revenues (such as property taxes, income taxes, and sales taxes) are measurable and available to finance the operations of the period intended. In effect, revenues are receipts plus short-term receivables—increases in net current financial resources. Practical difficulties (such as lack of information and procedures) may further push the recognition of some revenues (such as fines, licenses, and permits) toward the cash basis.

The GASB has been struggling with the issues of accrual accounting since the board's inception. It has been pushing governments in the direction of recognizing and reporting more long-term liabilities, such as employee pensions; other postemployment benefits; claims, judgments, and compensated absences; and capital lease obligations. Though significant, these disclosures would not have an impact on current budgetary decisions because of the disconnection between these long-term liabilities and the short-term perspective of governmental funds.

In other words, when governmental funds use the weak modified accrual basis, noncurrent financial resources and capital assets, along with long-term liabilities, are excluded from their balance sheets. This omission is partially compensated by the disclosure of general fixed assets and general long-term debts adjacent to the balance sheets of the funds. As noted earlier, there are two types of liabilities: capital debt and operating debt. The capital debt in the general long-term debt disclosures is offset by the general fixed assets. There are, however, no assets to offset the operating debt, which was incurred to provide services in the current or past periods. Placing these operating debts, which are in effect deferred costs for current services, outside the responsible funds is an attractive option to politicians and public managers under pressure to produce balanced cash budgets. But this practice raises the question of intergenerational equity: future taxpayers will be asked to pay for services received earlier by others.

Proposed Policy

To achieve the objective of intergenerational (operationalized to be interperiod) equity, the GASB in 1990 issued a standard requiring the operating statements of governmental funds to move effectively from the weak modified accrual basis to the strong modified accrual basis of accounting. This policy shift was announced in GASB's Statement No. 11, titled *Measurement Focus and Basis of Accounting: Governmental Funds Operating Statements*, and was to be effective for fiscal years beginning June 15, 1994. In the board's view, the operating statements would help users find out "the extent to which current-year revenues were sufficient to pay for current-year services

(Governmental Accounting Standards Board, 1996b, para. 27). The adoption, however, of a flow-of-financial-resources measurement focus, rather than a current-financial-resources measurement focus, would mean that an increase in long-term operating debt would be counted as an expenditure (or expenditure II in the lexicon of this chapter) in the operating statement. The other implication, which was not addressed by Statement No. 11, was that long-term operating debt would be moved from the general long-term debt disclosures to the general fund or special revenue funds. As every accounting student knows, for the two sides of the accounting equation to remain equal, increases in long-term liabilities unaccompanied by compensating increases in assets would require an offset through a decrease in net assets or fund equity. To the extent that a government has an appreciable amount of pensions payable and vacation and sick leave liabilities, the incorporation of those monies into a fund might lead to the reporting of a sizable negative fund equity. Whereas in the past public officials could conveniently ignore off-fund disclosures, it would be hard to overlook a visible negative fund equity.

Statement No. 11 was not entirely a bitter pill. It made the recognition of a higher level of revenue possible by pushing the accrual of revenue to earlier points. Namely, tax revenues would be recognized when the underlying events generating the revenues had occurred and the government had demanded payment (such as by setting a due date). For example, a property tax would be recognized when levied, income tax would be recognized when taxable income was earned, and sales tax would be recognized when the taxable transactions had occurred. Revenues from nontax, nonexchange transactions (such as fines, licenses, and permits) would be recognized when the underlying events had occurred and the government held a legally enforceable claim. (As before, earned revenues would be recognized after the government had provided the services.)

Statement No. 11 represented a revolutionary step. Not only would its implementation move government from weak modified accrual to strong modified accrual, but it would also reach for the goal of full accrual. Sophisticated analysts and public officials ran simulations to see how their government financial picture would be portrayed, but apparently they did not like the projected scenarios and began to oppose Statement No. 11. After considerable debate, and bowing to its constituents' concern that the costs associated with implementing Statement No. 11 would outweigh the benefits, the GASB (through Statement No. 17, issued in 1993) indefinitely postponed the effective date of the standard.

In retrospect, one could reasonably predict that given the political and economic incentives to postpone costs to the future, the GASB was swimming against the current by subscribing to the objective that "the intent of balanced budget laws is that the current generation of citizens should not be able to shift the burden of paying for current-year services to future-year taxpayers" (Governmental Accounting Standards Board, 1996c, para. 60).

The New Reporting Model

In the wake of the failed attempt to adopt a strong modified accrual basis in accounting for core governmental functions, the GASB has taken a different tack in advancing its agenda. It now advocates the coexistence of the weak modified accrual basis and the full accrual basis in the same reporting model. In this dual-perspective

model (Governmental Accounting Standards Board, 1997), the governmental funds would continue to be accounted for on the weak modified accrual basis in the fund-perspective financial statements. The full accrual basis, however, would be used in preparing entity-wide (that is, consolidated) financial statements. Specifically, capital assets would be displayed on the entity-wide balance sheet — now called the statement of net assets — and depreciation expense would be included in the expenses reported in a statement of activities.

Although the GASB has crafted an artful compromise to create the best of both worlds (status quo in the fund-perspective statements and revolutionary changes in the entity-wide statements), the new model sends a mixed message. Yes, governments will be obliged to move toward full accrual, but that move would not be expected to have real budgetary consequences. Because state and local governments usually budget by fund, they could overlook the entity-wide liabilities that do not belong to any specific funds.

FEDERAL ACCOUNTING STANDARDS

The budget has traditionally dominated federal financial management. In this environment, accounting — or more precisely, budgetary accounting — functions as a budget execution tool. Budgetary accounting measures and controls the use of budgetary resources as provided by law, and records receipts and other collections by source. Budgetary accounting systems track the use of each appropriation through the various stages of budget execution— apportionment, allotment, obligation, and outlay— after funds are appropriated. The close relationship between budgeting and accounting was clearly evident in GAO Title II, the compilation of federal accounting rules used until the early 1990s, when the Federal Accounting Standards Advisory Board (FASAB) was established.

The FASAB also recognizes a close link between budgeting and accounting. Its “budgetary integrity” objective states that federal financial reporting “should provide information that helps the reader determine how information on the use of budgetary resources relates to information on the costs of program operations and whether information on the status of budgetary resources is consistent with other accounting information on assets and liabilities” (U.S. Office of Management and Budget, 1993b). Accounting, however, at least in the context of general purpose external financial reporting, has emerged as complimentary, rather than subordinate, to the budget. Specifically, the basis of accounting used in external reporting need not be the same as the one used in the federal budget. In principle, federal financial accounting should use the full accrual basis, modified as necessitated by circumstances. Differences that exist between the accounting and budgetary bases are to be explained and reconciled.

Differences exist because the FASAB’s basic approach is the accountant’s balance sheet perspective described previously. Not only do the FASAB standards require a balance sheet, but in many ways the stewardship reporting requirements enunciated by the FASAB exceed the scope and measurement capability of full accrual under current generally accepted accounting principles used outside of the federal government. The stewardship objective calls for the disclosure of such resources as the following:

- Heritage assets (such as the Washington Monument); federal mission property, plant, and equipment (such as weapon systems), and federal land not used in operations
- Federal grants for physical properties that are subsequently owned by state and local governments, as well investments in human capital (such as educational and training programs) and research and development
- The projected future costs of providing services, assuming no policy change

By opting for disclosure rather than accounting recognition, the federal government defers the resolution of some of the most intractable measurement problems imaginable in accounting.

Compared to the kind of accounting envisioned by the FASAB standards, the federal budget's measurement method borders on being primitive. The federal deficit is the difference between receipts and outlays (Equation 1). Thus it operates essentially on the cash basis. As Schick explains (1995, pp. 27-31), there are a half-dozen measures of "deficit." But most of these measures are concerned with the types of entities or expenditures included, rather than with the measurement rule. Outlays are the last step of the spending process that originates from the budget authority granted by Congress. Budget authority is apportioned to agencies, usually for a period, by the Office of Management and Budget and is then allotted to the agency's subdivisions. Budget authority is then actually available for obligations in terms of contractual commitment to another party. Later, when contracted goods or services are received, the related obligation becomes a liability. The liquidation of a liability results in cash outlays (Schick, 1995, pp. 165-185).

To manage federal spending properly, the federal government's accounting systems need to possess the capacity to track the changing status of budget authority at various stages of budget execution. Traditionally, the budget system tends to keep track of obligations and outlays, while the accounting system, designed on the accrual basis, monitors accrued expenditures (that is, liabilities) and is consistently urged to measure cost (expense). As shown later in the chapter, considerable progress has been made, at least in terms of accounting standards, to integrate budgeting and accounting systems. Even though the literature is not unambiguous, it seems fair to consider outlay plus obligations to be the prevailing budgetary basis of the federal budget.

Specific Standards

Since its establishment in 1990, the FASAB has exhibited an increasing willingness to embrace the accrual basis of accounting. It began by attempting to conceptualize certain assets, namely cash, fund balance with the Treasury, accounts receivable, interest receivable, advances and prepayments, and investments in Treasury securities, as financial resources. These resources, when offset by current liabilities, such as accounts payable and interest payable, become net financial resources. Acceptance of this modest step turned out to be unexpectedly difficult in an environment in which accounting rules prevailed.

After this initial inertia, the movement toward full accrual gained considerable speed. Furthermore, the FASAB seemed to have learned from the GASB's lesson: it was fully

cognizant of the balance sheet effect of accruals. In fact, a majority of standards deal with assets and liabilities. On the asset side, recognition is made of inventory and related property, direct loans, and property, plant, and equipment. On the other side of the balance sheet, liabilities are recognized for a wide range of obligations such as loan guarantees, federal debt, pensions and other retirement benefits, insurance and guarantees, capital leases, and contingencies. Furthermore, the FASAB took on the task of articulating standards for revenue recognition and cost measurement (U.S. Office of Management and Budget, 1993b). Following is a summary of the major standards.

Revenue recognition. The FASAB distinguished between exchange revenues and nonexchange revenues. In principle, nonexchange revenue should be recognized when “specifically identifiable, legally enforceable claims to others’ assets” are established. The FASAB imposed the measurability criterion, but it does not use the availability criterion; instead, probable recognition is added as a criterion. The FASAB acknowledged that, in reality, taxes and duties are accounted for on a modified cash basis, which seems to be even weaker than weak modified accrual, even though ideally accrual is desirable (U.S. Office of Management and Budget, 1996a, pp. 61-67).

Cost measurement (expense recognition). Federal agencies are required to accumulate and report cost of activities regularly and to establish “responsibility segments” for matching costs with outputs. In particular, the statement advocates the use of full-cost accounting, which includes direct and indirect costs, including allocated costs thereof, and the reporting entity’s own costs as well as the cost of goods and services received from other entities (U.S. Office of Management and Budget, 1995a).

Asset recognition. Federal accounting has taken decisive steps to put assets other than cash (and its equivalence, fund balance with the Treasury) on the balance sheet. Accounting for direct loans was given special impetus in light of the 1990 Credit Reform Act. The FASAB decided to follow the lead of legislation by stating direct loans at the present value of their estimated net cash inflows. Finally, fixed assets that are used in providing general government services are admitted to the balance sheet. Those assets that involve very difficult identification and measurement problems—such as federal missions property, plant, and equipment; heritage assets; and federal land—are subject to what is called “supplementary stewardship reporting.” That is, they are to be identified and measured in physical terms but not in terms of cost or economic value (U.S. Office of Management and Budget, 1993a, 1993c, 1995a).

Liability recognition. Besides addressing the conventional liabilities such as accounts payable, interest payable, and salaries and wages payable, federal accounting standards also tackled other relatively controversial federal liabilities. Political wisdom and technical problems combined to keep the megaliabilities associated with social insurance programs (such as social security) from accounting recognition as liability on the balance sheet. Nevertheless, the financial risk exposure of the federal government is considerable. Three types of events that give rise to federal government liabilities are transaction-based events, government-related events, and government-acknowledged events. In substance, these events amount to contractual obligations, legal obligations, and social obligations (U.S. Office of Management and Budget, 1993c, 1996).

Taken as a whole, the body of federal accounting standards solidly put the federal government’s financial reporting on the full accrual basis.

ACCRUAL BUDGETING?

The current relationship between accounting and budgeting may be described as a kind of “constructive engagement.” In other words, there exists an ongoing dialogue between accountants and budget analysts, and results of operations are presented and reconciled on both the accrual and budgetary bases. This approach reflects the recognition that accrual accounting and cash budgeting each serves a legitimate purpose and should be allowed to coexist. The FASAB explains this relationship as follows (U.S. Office of Management and Budget, 1996a, pp. 79-80):

Differences inherent in the different objectives of the budget and the [general purpose] financial statements must remain. The obligation basis for the budget differs from the costs-incurred [accrual] basis for the financial statements. This difference must continue in order for both types of information to serve their purposes. Some budgetary resources are used to invest in assets and therefore are not reflected in operating costs. Also, an entity may incur costs that were covered by previously provided budgetary resources (for example, depreciation), costs not yet covered by budgetary resources (for example, accrued annual leave), or costs covered by budgetary resources of other entities (for example, some pension costs). Continuing these differences in accounting reports is essential if financial statements are to report cost information that can be related to entities’ outputs and if the statements are to report other information on the resources over which the entities are accountable. These remaining differences need to be explained in the financial statements to increase the utility of the financial statements.

The reconciliation approach implies that the accrual basis is no better than the cash basis. To claim so would understate the acceptance level of the accrual basis. There is universal acceptance in principle that the accrual basis of accounting is essential for the fair presentation of an entity’s financial position and performance; as such, it is sanctioned by GAAP. However, as explained in the previous sections, there is considerable variation in the way accrual is applied in government. This section explores the implications of accruals for the budget.

To some extent, there is already some application of the accrual concept in budgeting. The recognition of obligations, in addition to outlays, as chargeable to an appropriation is a kind of accrual. The objective of this budgetary accrual — a preemptive measure — is to prevent overspending. It is quite different from accounting accruals, which are concerned with capturing all the future impact of a past action. To facilitate the analysis, the focus here will be on the effects of the accrual concept on budget deficit (Equation 1), which is often regarded as the bottom line of budget deliberations.

For illustrative purposes, the balance of this section will address the implications for the deficit of accruing long-term operating debt, accruing capital expenditures, accruing human capital and research and

development expenditures, and accruing the cost of direct loans and loan guarantees.

Accruing Long-Term Operating Debt

Recall Case 1 involving Mr. Policeman. Long-term operating debt refers to the cost of services deferred for more than one year into the future for payment. A prime example is liability for employee pension benefits. When such costs are deferred, the cost of services on the strong modified accrual basis is greater than the amount of cash outlays during the period. If appropriations are made on the basis of the amount of projected cash outlays, unfunded liabilities will continue to arise. Consequently, the cash basis understates the deficit by the amount of increase in unfunded liabilities. If revenues are levied to cover only such appropriations to balance the (cash) budget, the current generation is undertaxed by the amount of unfunded liabilities. Additional revenues would have to be raised in the future to pay for past services. Such a funding method violates the notion of intergenerational equity.

Intergenerational equity would require the balancing of multiyear cash budgets instead of annual cash budgets. Take the year (t+1) as an example, and let COS stand for the cost of services. To the extent that the COS of a period is not entirely paid for, the taxation and spending transactions are incomplete at the end of that year; thus there are future consequences to be reckoned with. Projected revenues (t+1) should be set to equal projected COS (t+1) on the SM accrual basis, including both cash payments and all liabilities attributable to the services rendered in that period. This practice would result in what is conventionally called cash surplus during the periods of service delivery. The accumulated cash surplus is intended to be used for liquidating the similarly accumulated liabilities in the postemployment periods. Assuming accurate projections, in the end the cash inflows should match the cash outflows.

In summary, the cash basis understates the deficit by the amount of deferred COS. When some COS are deferred to the future for payment, accrual budgeting, compared with cash budgeting, will result in higher current taxes and lower future taxes, other things being equal. The cash surpluses (excess) in the earlier years will be used to make up for the cash deficit (deficiency) in later years. The government balances its multiyear budget by basing its taxes on the accrual basis COS.

Accruing Capital Expenditures

Assume that during a certain fiscal year the government runs a cash deficit of \$20 million—the total projected outlays of \$120 million exceed projected receipts of \$100 million. Suppose the budget includes \$20 for purchasing capital equipment. One may then conclude that the cash budget deficit is caused entirely by the capital investment and that the government's operating budget is actually in balance. A relevant budget policy question is, How should the \$20 million of capital budget spending be financed? Running a cash deficit is one option; another option is to borrow the \$20 million based on the principle of "no service, no taxes."

As Case 2 explained, the cash basis and the modified accrual bases of counting will all treat the \$20 million as capital expenditures in the sense of using financial resources.

This is the conventional treatment of capital budgets, which show capital spending and its financing sources. The full accrual however, will treat the \$20 million as an asset and the associated borrowings capital debt. Under accrual budgeting, these capital-related transactions would be reported in three places: in the balance sheet as an addition of capital asset in the cash flows statement as a cash outlay in the investing activities section of the cash flows statement, and in the cash flows statement but in the financing section as borrowings for financing the capital acquisition (see Table 14.5). This approach is consistent with state and local government practices of separating the overall budget into an operating budget and capital budget, requiring the operating budget to be balanced, and financing capital spending by debt. A conventional (that is, cash basis) budget is in effect a pro forma cash flow statement. Accrual budgeting would require, in addition, a pro forma balance sheet and a pro forma operating statement to communicate the additional information.

Accruing Human Capital and R&D Expenditures

Does the idea of accruing capital expenditure as assets extend to accruing investment in human capital (that is, health and education) and R&D expenditures made by government? Probably not, for these reasons:

- The measurement of the economic value of human capital and R&D spending is not precise enough to survive the auditor's skepticism and the political credibility test.
- The government does not own or exercise effective control over any of the resulting assets even if any were recognized.
- The sunk costs cannot be used to pay off debt.

Hence these expenditures, as well as many other federal capital expenditures, are not capitalized. Nevertheless, the budget classification would make clear the long-term investment nature of these expenditures.

Accruing the Costs of Loans and Loan Guarantees

Loans and loan guarantees is one area in which accrual budgeting has made definite progress. In 1967, the President's Commission on Budget Concepts recommended that the unified budget distinguish between expenditure accounts and the loan accounts and place net lending (loan disbursements net of loan repayments) in the latter. In so doing, the commission appropriately distinguished between loan disbursements (which create a financial asset) and other expenditures, and between loan repayments (which reduce existing financial assets) and receipts. Nevertheless, the net result for the unified budget was the same: net lending contributed to the unified (cash) budget deficit. It was not until almost twenty-five years later that the 1990 Credit Reform Act put federal credit programs on a type of accrual basis.

Table 14.5. Pro Forma Financial Presentation
Under Accrual Budgeting (in Millions of Dollars)

Balance Sheet	Operating Statement	Cash Flow Statement
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Capital Assets	\$20	Revenues	\$100	Operations	\$0
Capital Debt	<u>\$20</u>	Operating Expenses	<u>-100</u>	Capital Investment	-20
Equity	\$0	Surplus or Deficit	\$0	Financing	<u>+20</u>
				Net Cash Flows	\$0

The kind of accrual required by the 1990 Credit Reform Act calls for the recognition of the government's future cost of extending credit or guarantees *when such decisions are made*. The purpose of this accrual is to provide the relevant information to policymakers early enough to make a difference in, for example, deciding between direct loans and loan guarantees and between direct loans and grants. The recognition takes place before the event (that is, before default) happens but after the credit decision is made. This kind of *prospective accrual*—in contrast to *retrospective accrual* in accounting—is preventive in the sense that the full cost of a decision is communicated to inform the credit decision. As such, decision relevancy is the primary criterion for deciding to accrue or not to accrue. The secondary criterion is to enforce budget discipline. For example, under the Credit Reform Act, making loan guarantees is no longer free in the sense that no immediate cash flow takes place. (Conversely, direct loans look less costly because only the default and interest subsidy costs are scored rather than the entire amount of the loan being treated as an outlay.)

Under the Credit Reform Act, accrual budgeting scored a victory. Significant as the effort was, it nevertheless has resulted in incremental progress rather than a paradigm shift. This is so far an isolated case of integrating accrual budgeting into an overall cash budgeting system. To put the entire federal budget on the accrual basis would require a revolutionary change.

AN ACCRUAL BUDGET

Currently the federal budget is conceptually one single document listing receipts minus disbursements. An accrual-based budget would require three documents:

A prospective balance sheet, for reporting, among other things, loans receivable and capital assets on the asset side, as well as long-term operating debt and capital debt on the liabilities side. Contingent liability for guarantees would be estimated and reported.

A prospective operating statement, to project revenues (rather than just receipts) and expenses (rather than outlays). The advantage of the expense concept is that it can encompass not only cash outlays but also, for example, the cost of loan defaults and interest subsidies.

A prospective cash flow statement, to show the planned net cash flows from current operations and the net cash flows from investing and financing activities. This statement would correspond to the present cash-basis budget.

In essence, the current budget may be thought of as having an operating component and an investment component. The operating component relates to the net cash flows

from operations, while the investment component features information about the cash outflows for investing activities and the cash inflows from financing.

In summary, a comprehensive accrual budgeting reform package would integrate the balance sheet perspective of the accountant and the operations perspective of the budget analyst. These two perspectives are complementary. Full accrual, however, with its emphasis on long-term assets and liabilities, raises uncomfortable questions about intergenerational distribution of the costs and benefits of fiscal policy.

It is unlikely that full accrual will be embraced by the federal budget anytime soon. (Remember that it took almost a quarter of a century to change the budget scoring rules on direct loans and loan guarantees.) Accruals are inherently difficult because they deal with remote and uncertain future benefits and costs. However difficult the measurement problem, the concept of accrual—that one cannot overlook the long-term consequences of current decisions and actions—was endorsed by the Hoover Commission in the 1950s and reiterated by the President’s Commission on Budget Concepts in the 1960s. Incremental progress in accrual budgeting has been made in parts of the federal budget, such as in the full funding of military pensions and in the Credit Reform Act. As accounting moves from weaker to stronger forms of accrual, the fiscal and therefore the political stakes are higher. When it comes to the mega-accruals of social security obligations and federal land and natural resources, accrual is no longer a technical accounting exercise. Accrual has become too important to be left to the accountant!

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