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Accounting Devices and Fiscal Illusions

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EXECUTIVE SUMMARY

A government seeking to reduce its deficit can be tempted to replace genuine spending cuts or tax increases with accounting devices that give the illusion of change without its substance, or that make the change appear larger than it actually is. Under ideal accounting standards, this would not be possible, but in real accounting it sometimes is. For example, governments can sometimes sell assets or borrow money and count the proceeds as revenue, or defer unavoidable spending without recognizing a liability. In each case, this year's reported deficit is reduced, but only at the expense of future deficits. The result is that the reported deficit loses some of its accuracy as a fiscal indicator.

The use of accounting stratagems cannot be eliminated, but several things can be done to reduce their use or at least bring them quickly to light. Governments can be encouraged to prepare audited financial statements—income statement, cash-flow statement, and balance sheet—according to international accounting standards, and statisticians, who in many countries use accounting data to compile the most important ("headline") fiscal indicators, can be given the resources and independence to be both expert and impartial, as well as the authority to revise standards in the light of emerging problems. To help reveal remaining problems in headline fiscal indicators, a variety of alternative fiscal indicators can be monitored, since a problem suppressed in one fiscal indicator is likely to show up in another. Many of the devices documented in this note would be revealed if governments also reported change in net worth and high-quality long-term forecasts of the headline indicator of the deficit under current policy.

I. INTRODUCTION

As advanced economies emerge from the economic and financial crisis that began in 2008, they will be under severe pressure to reduce their deficits, and they will set themselves demanding fiscal targets. Without improvements in the quality of fiscal reporting, however, it will be difficult to gauge their success in achieving genuine fiscal consolidation. If history is a guide, some of the efforts that should be dedicated to cutting spending or raising taxes may be diverted to the design of accounting devices, that is, stratagems that reduce this year's reported deficit only by increasing subsequent deficits. As a result, fiscal adjustment may be partly an illusion.[2]

In retrospect, it is clear that accounting devices contributed to the fiscal problems that many countries are now experiencing. They made public finances look better than they really were in the years before the crisis, and therefore encouraged looser fiscal policy then. But their significance should not cause us to lose sight of other, more important factors. In most countries the biggest fiscal problems arose from the financial crisis, which led governments to take over financial institutions and caused a recession that undercut their tax revenue.

This note reviews some of the accounting devices that have undermined the quality of fiscal reporting in advanced economies in recent years. It draws on many earlier studies, including Easterly (1999) and Koen and van den Noord (2005). As well as providing recent examples, it presents a taxonomy of accounting devices and investigates the link between accounting devices and the choice of accounting and statistical standards. Finally, it suggests ways of addressing fiscal illusions by providing a more comprehensive picture of public finances.

Most of the examples mentioned in this note come from advanced economies, not because their problems are worse, but because accounts and statistics tend to be scrutinized carefully, and problems tend to be documented in the press or official publications. In the United States, for example, problems in headline fiscal indicators are often revealed by analysis made public by the Government Accountability Office or the Congressional Budget Office, and indicators derived from budgetary accounting can be compared with indicators derived from reports prepared according to different accounting standards.

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[2]The use of accounting devices could conceivably mean that most or even all apparent adjustment was a "fiscal illusion" (a term introduced by Amilcare Puviani in 1897). Considering U.S. states, von Hagen (1991, p. 209) concludes that "the most significant effect of fiscal restraints is to induce governments to substitute nonrestricted for restricted debt instruments, thereby reducing the relevance and informativeness of data on government debt." But more probably accounting devices will be used to eke out the effects of genuine adjustment. Also considering U.S. states, Poterba (1995, p. 331) concludes that "some cosmetic changes are used to meet balanced budget requirements," but "these changes are quantitatively less important than tax increases and spending cuts."

II. A TAXONOMY OF ACCOUNTING DEVICES

The essence of an accounting device is to improve headline fiscal indicators without actually improving public finances, or without improving them to the extent suggested by the headline indicators. A device aimed at the deficit reduces this year's deficit, but increases future deficits by an amount that largely or wholly offsets the initial improvement. To do this, it must either increase reported revenue or decrease reported spending in the year (or years) of interest. And, in return, it either decreases reported revenue or increases reported spending in future years.

Deficit devices can thus be classified in a two-by-two table, and the four resulting varieties can for convenience be labeled *hidden borrowing*, *disinvestment*, *deferred spending*, and *foregone investment* (Table 1).[3]

Table 1. Taxonomy of Deficit Devices

		Later	
		More spending	*Less revenue*
Now	*More revenue*	Hidden borrowing	Disinvestment
	Less spending	Deferred spending	Foregone investment

What counts as a deficit device depends on the accounting standards used to measure the deficit. Under the cash basis of accounting, this year's deficit can be reduced simply by deferring payments so that they fall in the next year. Under the accrual basis, in which costs are recognized when they are incurred, not when cash is disbursed, accounting devices demand more expertise, but are still possible. In Europe, the Maastricht measure of the deficit is a partly accrual-based statistical measure, but it can be reduced by taking over pension schemes or by having spending undertaken by public enterprises or public-private partnerships. Under different accrual standards, these devices would not work, but others would. Devices that reduce the reported deficit typically also reduce reported debt, but the two effects do not always go together. For example, it is possible to reduce debt by selling financial assets, but in most accounting systems, including the one used in Europe, this does not reduce the deficit.

[3]Countries running surpluses may also be tempted to resort to "cookie-jar" accounting in which present surpluses are artificially reduced, for example by recognizing unwarranted liabilities that can later be reversed to reduce future deficits. Few advanced economies are likely to find this tempting in the near future. But some may be attracted to "big-bath" accounting, in which a new government recognizes all of a previous government's fiscal problems and more, so that it can report bigger improvements in fiscal performance during its own tenure. Another possible device not discussed here is to inflate estimates of GDP, since many debt and deficit rules concern the ratios of these variables to GDP; more common is probably the underestimating of GDP because of the difficulty of capturing data on the informal sector.

Not everything that reduces this year's deficit or debt without improving net worth is properly characterized as an accounting device. If a government sells an asset only to meet a deficit or debt target, it may be employing an accounting device. But it may also sell the asset to reduce its exposure to risk or because it believes others can manage the asset better. Indeed, many transactions with accounting benefits also have other justifications, which may either persuade the government of the merits of the transaction, or at least allow it to describe the accounting benefits as serendipitous.

Similarly, not all limitations in fiscal accounting make public finances look better than they are. For example, the right to tax is an enormously valuable asset that is not recognized on traditional balance sheets. And investment can increase the deficit, even though it may create infrastructure of enduring value that generates user fees or spurs growth and therefore boosts tax revenue. When governments reduce the reported deficit by scrapping planned investments in such assets they are reducing the reported deficit without increasing net worth, but the underlying problem is that the accounting that is used to measure the deficit treats the investment as ordinary spending.

III. HIDDEN BORROWING

The first accounting device, *hidden borrowing*, increases reported revenue now but increases reported spending later. In Europe, governments are able to reduce their headline deficits by taking over pensions schemes of private companies or public enterprises. The obligations to make future pension payments do not count as liabilities, so when governments take over the pensions in return for compensating payments, the compensating payments count as revenue.[4] The government of Portugal used this device to reduce its reported deficit in both 2010 and 2011, as well as in earlier years. But it is not alone: the device has also been used in Austria, Belgium, Denmark, France, and Sweden (Koen and van den Noord, 2005). France, for example, satisfied the deficit criterion for monetary union in 1997 by assuming the pension liabilities of France Télécom in return for an upfront payment of €5.7 billion (0.5 percent of GDP), and then in 2005 assumed those of Electricité de France and Gaz de France in return for a payment of €8.6 billion (also 0.5 percent of GDP). The transactions were motivated not only by the government's desire to reduce its reported deficit but also by the firms' desires to avoid having to report very large pension liabilities when they adopted International Accounting Standards (Paul and Schalk, 2007).

In Arizona, the sale and leaseback of government-owned property is used to allow borrowing that is hidden, at least for the purposes of an antiquated fiscal rule. The Arizona state constitution says that the "state may contract debts . . . but the aggregate amount of such debts, direct and contingent, . . . shall never exceed the sum of three hundred and fifty

[4]On the origins of this treatment, see van Wijk (2001, chapter 15).

thousand dollars." This rule seems extremely restrictive, but no standard for measuring debt is specified, and the rule has been interpreted as preventing only the most standard of loans. And, in 2010, the State effectively borrowed $1 billion by selling and leasing back buildings including the state capitol (State of Arizona, 2010, p. 233). Sale-and-leaseback transactions are also used in Europe to reduce deficits, as planned, for example, in Andalusia and Catalonia (Smyth, 2011; Delgado, 2011).

Swaps, which are used to hedge financial risks, can also be used to undertake borrowing that is not reported as such. In a currency swap, two parties agree to make a series of payments to each other in different currencies. In a typical swap, the expected present values of the two series of payments are equal when the swap is agreed. Thus no money changes hands upfront, and no liability is created. But if swap payments are based on an "off-market" exchange rate (that is, a rate other than the current market rate) the two series of payments will in general have different expected present values, and a liability will be created. That liability, however, may not have to be counted as debt; derivative liabilities are excluded, for example, from the definition of debt underlying Europe's debt rule.[5] From 2001 to 2007, Greece reportedly used such arrangements to mask €5.3 billion of debt (2.3 percent of GDP) (Eurostat, 2010a) and reportedly paid fees to Goldman Sachs and other investment banks that were higher than those charged for issuing ordinary debt (Dunbar, 2003; Story, Thomas, and Schwartz, 2010). Belgium, Germany, Italy, and Poland reportedly used similar swaps (Katz and Martinuzzi, 2010; European Parliament, 2010; Piga, 2001).

IV. DISINVESTMENT

The second accounting device, *disinvestment*, increases reported revenue now and reduces reported revenue in the future. Under some cash-accounting standards, the proceeds of privatization are revenues that reduce the deficit. But if the sale deprives the government of future dividends its true fiscal benefit may be much smaller than its reported effect.[6] Under other standards, such as those underlying Europe's fiscal rules, the proceeds of the sale of financial assets, such as shares in a public enterprise, do not reduce the deficit, but the proceeds of the sale of nonfinancial assets do. Thus Germany's effort to satisfy the criteria for adoption of the euro in the late 1990s was aided by, among other things, the sale of

[5]Derivative liabilities are still recognized in the balance sheets of standard fiscal statistics, which means that off-market swaps should not reduce the reported deficit even if they reduce reported debt.

[6]Estimating the long-run effect requires difficult judgments about the discount rate and what would have happened in the absence of privatization. Galal and others (1994) look at 12 cases of privatization and conclude that governments gained in 9 of them (p. 530). Quiggin (2010, chapter 5) considers other cases and concludes that the long-run effect is often negative.

railway land worth 2 billion deutschemarks to an entity outside the general government (Schipke, 2001, p. 53).[7]

In the 2000s, many European governments turned to securitizing future government revenues to reduce their debts and/or deficits. In these deals, governments sold rights to receive future cash flows that they would otherwise have received themselves. There is nothing wrong with securitizations in themselves, but their appeal was at least partly that they allowed governments to raise funds without violating debt and deficit targets (Lambe, 2005; Brown and Chambers, 2005; Santos, Freire, and Figueiredo, 2006). Greece securitized lottery proceeds, air-traffic-control fees, and EU grants (Euroweek, 2000, 2001a, 2001b). Portugal and Belgium securitized tax receivables (Santos, Freire, and Figueiredo, 2006). In some cases, the securitizations were more or less genuine asset sales; in others the government explicitly or implicitly guaranteed cash flows, so the transactions were effectively loans to the government. Germany, for example, received €15.5 billion from the securitization of pension-related payments from Deutsche Telekom, Deutsche Post, and Deutsche Postbank in 2005–06, but it guaranteed the payments so investors bore only the risk of the German government's credit (Euromoney, 2005)—and the transactions were ultimately recorded in Europe's fiscal statistics as government borrowing, not asset sales.

V. Deferred Spending

The third accounting device, *deferred spending*, reduces reported spending now, but increases it later. In the United States, the government has met predominantly cash-based targets for the deficit by postponing a military payday by a single day (New York Times, 1987) and by deferring Medicare payments that would have been made in the last week of the year (Block, 2008, pp. 52, 54; CBO, 2006). Of course, other things equal, deferring spending does reduce interest costs, but the real saving in these cases is much less than the reported reduction in the deficit of the year at issue. Less directly, governments sometimes defer maintenance of roads and other assets even though maintaining assets is ultimately cheaper than letting them deteriorate to the point at which they must be rebuilt (Easterly and Servén, 2003).

Leasing instead of buying equipment can also defer reported spending. In the United States, the Air Force once proposed leasing 100 refueling planes from Boeing at a cost, in 2003 present values, of $15 billion, under an arrangement designed to be an operating lease for accounting purposes, because the U.S. government reports its debt according to the conventional accrual-based accounting practice of treating financial but not operating leases

[7]In an earlier example, the sale of forestry cutting rights in New Zealand improved the 1990–91 fiscal balance by some 1.6 percent of GDP, turning what would have been a deficit into a surplus (OECD, 1991, p. 43).

as creating debt.[8] Reviewing the deal, the Congressional Budget Office concluded that "the proposed transaction would essentially be a purchase of the tankers by the federal government but at a cost greater than would be incurred under the normal appropriation and procurement process" by 10–15 percent (CBO, 2003, pp. 1, 2).

Under some accounting standards, public-private partnerships can similarly defer the reporting of public spending. By involving private companies in the provision of public services in new ways, these partnerships can have real fiscal benefits. Yet often it is their illusory fiscal benefits that make them appealing. In Portugal, as in United Kingdom and many other European countries, the government has used public-private partnerships to build new roads, railways, and hospitals without having to count the investment spending as its own, even though the government assumed debt-like obligations to pay for the infrastructure later. Over time, the obligations have grown, and the government must now spend nearly 1 percent of GDP to meet the commitments made earlier (Portuguese DGTF, 2011).

Civil-service pensions can defer even larger volumes of spending when the accounting does not treat the pensions as liabilities. Many governments pay their employees partly by offering them defined-benefit pensions; if they did not, they would have to offer them higher cash salaries. The liability related to the government's obligation to pay the pensions in future typically grows larger over time, but most governments do not recognize that liability in their accounts and therefore do not record the increase in the liability as a cost in the deficit. Pensions paid to current retirees are counted in the deficit, but are typically less than the increase in the present value of the obligation to pay pensions to future retirees. Though widespread, the problem is clearest in the United States, because the federal government produces not only a predominantly cash-based indicator of the budget deficit, but also a less influential (Jackson, 2008) accrual-based indicator that treats the pensions as liabilities. In 2006–10, the U.S. federal government's estimate of the full cost of offering military and civil-service pensions was greater than the cash actually paid out to retirees by an average of 1 percent of GDP a year.[9]

Over time, civil-service pensions can create large liabilities, as shown for five central governments that report contractual pension liabilities on their accounting, as opposed to their statistical, balance sheets (Table 2).[10] The extent to which this reporting is influential is

[8]A *financial* (or in U.S. terminology *capital*) lease generally has a duration that is long relative to the life of the leased asset and generally transfers to the lessee most of the risks and rewards normally associated with owning the asset. Other leases are operating leases.

[9]See the U.S. Treasury's *Financial Reports of the United States Government* for the years 2007 to 2010 and also CBO (2006).

[10]The central government of France publishes an accounting balance sheet that, for 2010, includes debt (65 percent of GDP) and other liabilities (20 percent), but not civil-service pensions. A note to the accounts discloses that the net present value of the obligation related to those pensions, calculated according to the open-

(continued…)

hard to assess, but it is notable that New Zealand's defined-benefit pension scheme for civil servants was closed to new employees when the preparation of the first set of accrual accounts revealed the size of the liability (Government of New Zealand, 2010, p. 78), and that the first publication of a balance sheet for the UK public sector, in 2011, has coincided with moves to change pensions for civil servants there. Noncontractual pensions for the public and other social benefits such as publicly funded healthcare can create (near) obligations that are larger still, even if they are not recognized as liabilities in any standard accounting.

Table 2. Composition of Recognized Liabilities of Five Central Governments 2010

(Percent of GDP)

	Debt	Civil-Service Pensions	Other Liabilities	Total Liabilities
Australia	14	10	8	32
Canada	37	13	8	58
New Zealand	36	5	25	66
United Kingdom	69	81	23	173
United States	62	39	11	113

Source: Financial statements for each central government for the years ending, respectively, June 30, March 31, June 30, March 31, and September 30. GDP data are from the IMF's World Economic Outlook, September 2011, and are for 2010 except for Canada and the United Kingdom for which they are for 2009.

Note: The liabilities are those recognized on the governments' balance sheets and exclude near liabilities related to public pensions and other social benefits. The accounting standards followed by the five governments are similar but not identical.

VI. FOREGONE INVESTMENT

The fourth accounting device, *foregone investment*, reduces reported spending now but reduces reported revenue later. When governments want new infrastructure to be built, they sometimes use concessions, a kind of public-private partnership in which the private company undertakes an investment under a long-term contract with the government, but receives its revenue from users. For example, since the early 1990s, much investment in public infrastructure in Chile has come from concessions for airports, toll roads, and other projects; total investment has amounted to some $7 billion or 4 percent of current GDP. These arrangements reduce the measured deficit in the years in which investment takes place, but increase it later, compared with what would have happened if the government had

group method, which takes account of future as well as past and present employees, is equivalent to 44 percent of GDP (Government of France, 2011, p. 167).

financed the investment and then collected the tolls itself. (The Chilean government has also granted minimum-revenue guarantees to many of the concessionaires.) The motivation for using concessions is not only to reduce the deficit in the short run, but it is notable that Chile has set itself a challenging fiscal rule and privately financed investment in concessions does not count as public spending for the purpose of assessing compliance with the rule (as it probably would under IPSASB, 2011a). Similar arrangements are common in other countries, such as Australia, where they have been used to get tolled bridges and roads built without initially increasing public debt (Quiggin, 2004).

VII. DISAPPEARING GOVERNMENT

A common way to reduce the reported deficit and debt in the short term is to have spending undertaken by a public entity that is not counted as part of the government for reporting purposes. Often the spending involves an investment, but one whose future profitability is doubtful. If the investment is unsuccessful, its cost may show up later either in the receipt of smaller dividends from the entity (foregone investment) or in the need to grant it greater subsidies (deferred spending). Because it can be hard to know in advance where the cost will show up, or how much it will be, it is convenient to discuss these cases together under the heading *disappearing government*. Lambe (2005) puts the problem nicely.

> As governments come under greater pressure to cut both costs and spending, more and more responsibility is being pushed down to the sub-sovereign level, to quasi-government bodies, municipalities and regional governments. Government-owned entities and their debt are being deconsolidated . . . .

There are many other examples of governments' keeping assets and liabilities off their own books. When Eurostat recently went through Greece's accounts, it reclassified bus, railway, and other companies as belonging to the general government and thereby increased Greece's reported debt by €18.2 billion, or 7.8 percent of GDP (Eurostat, 2010a). (Although European fiscal data are not perfect, one of their many good points is that they include the operations of public enterprises when there is strong enough evidence that they are noncommercial.) When the privately owned British rail-network company failed, the government guaranteed its liabilities, but the takeover was designed in such a way that the new company's liabilities were not included in the headline indicator of debt, even though the new company had no shareholders (it was "limited by guarantee") and was almost entirely funded by government-guaranteed debt.[11] In China, local governments are not generally allowed to borrow themselves, but they can establish entities that can essentially borrow on their behalf. In the United States, Bunch (1991, p. 66) found that states use public agencies to circumvent constitutional debt limits. In Brazil, the national development bank BNDES is used to carry

[11]For a discussion of the issue, see NAO and ONS (2002).

out important fiscal functions using capital provided by the government, but the transactions are treated as below the line.

At present, the largest unrecognized assets and liabilities relate to the banking crisis. The German Ministry of Finance recently argued, without success, that its banking-crisis-resolution entity should be classified outside the general government (Eurostat, 2010b). On the other hand, Ireland's banking-crisis-resolution entity was considered to comply with a list of statistical criteria established by Eurostat for classification outside general government, including majority private ownership; limited duration, scope, and expected losses; and establishment to deal with a crisis (Eurostat, 2009). The entity acquired banks' large commercial property loans at a substantial discount financed by government-guaranteed debt, amounting to 19.7 percent of GDP at end-2011. The United Kingdom recognized the loss it expected to incur in acquiring RBS and Lloyds, but does not recognize as its own the banks' assets and liabilities. The United States does not recognize as its own the assets and liabilities of Fannie Mae and Freddie Mac.

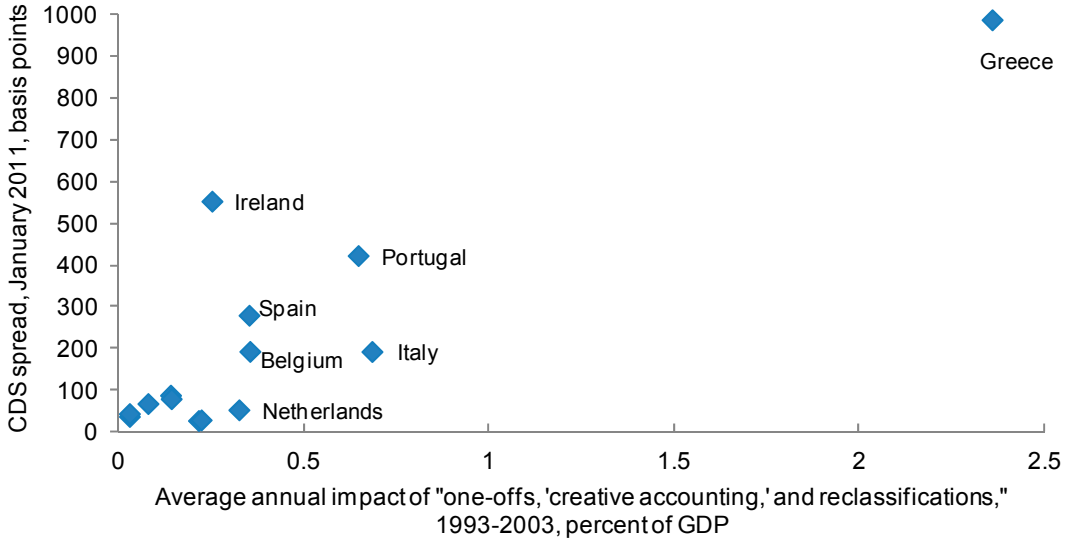
VIII. The Size of the Problem

The nature of accounting devices makes hard data on size of the problem scarce. If the only indicator of the deficit is the one distorted by devices, there is no benchmark against which the use of such devices can be measured. Yet there are sources of information that allow a glimpse of the size of the problem.

One source of evidence is an inventory of accounting devices used in Europe in 1993–2003 collected by Koen and van den Noord (2005). During that period, the average impact of their measure of "one-offs, 'creative accounting,' and reclassifications" was roughly 2 percent of GDP a year in Greece, ⅔ of a percent in Italy and Portugal, and ⅓ of a percent in Belgium and Spain (Figure 1). In 36 of 165 possible cases, the deficit was reduced by more than ½ a percent of GDP, even though the measure is conservative in that it does not incorporate investments in public-private partnerships or the ordinary accumulation of liabilities related to civil-service pensions. It is, however, correlated with recent market perceptions of default risk (CDS spreads) in early 2011, perhaps because devices delayed genuine adjustment, perhaps because investors discount the claims of governments that have made heavy use of them, perhaps because enduring fiscal problems encouraged the use of accounting devices then and now create fears of default.

Another source of information is revisions of initial estimates of deficits. Examining Eurostat data, de Castro, Pérez, and Rodríguez Vives (2011) found that the final estimates of the deficit in the European Union in 1998–2005 were on average ⅓ of a percent of GDP larger than the first estimates. The average revisions were nearly 2 percent of GDP in Greece and more than ½ a percent in Austria, Italy, Portugal, and Sweden. Beetsma and others (2011) find that upward revisions are generally smaller in countries with more fiscal transparency.

Figure 1. European Union: Relationship of Accounting Devices, 1993–2003 and CDS Spreads, January 2011



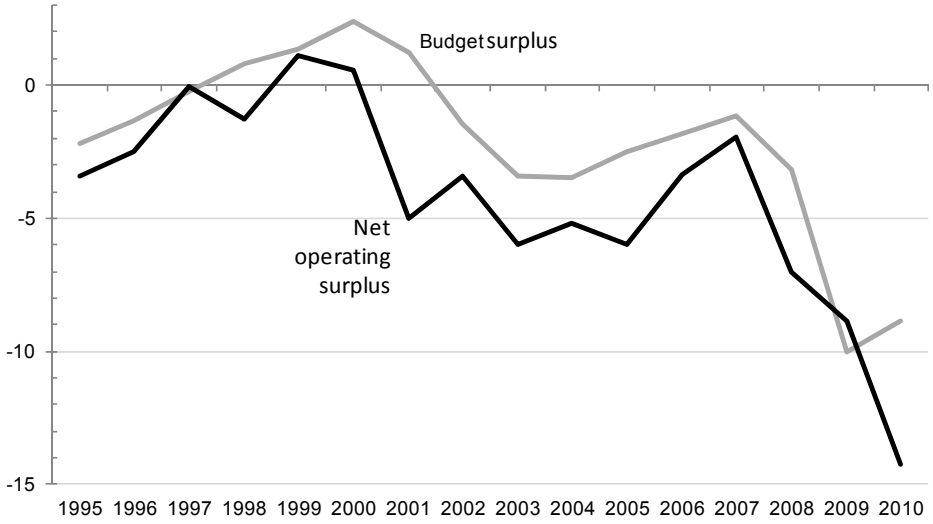
Source: Koen and van den Noord (2005) and Bloomberg.

Note: The labeled countries are those with the highest values on the horizontal axis. The unlabeled countries are Austria, Denmark, Finland, France, Germany, Sweden, and the United Kingdom.

Large, unexplained differences between the deficit and the increase in debt can also indicate problems in estimates of the deficit. The expected relationship between the deficit and the increase in debt depends on how the deficit and debt are measured, and there is no reason to expect them to be identical, for example because a government can borrow to purchase financial assets, a transaction that increases debt but does not increase the deficit as typically measured. (By contrast, in a comprehensive set of modern financial statements the increase in a government's *net worth* from one balance sheet to the next should be identical to the broadest indicator of the surplus for the intervening period.) But large, persistent, and unexplained "stock-flow adjustments" (that is, increases in debt that exceed the deficit) suggest that the recorded deficit may be systematically underreporting fiscal costs. In 1980–2010, the average stock-flow adjustment in a sample of 163 countries was 2.6 percent of GDP, and the size of unexplained differences was correlated with an index of fiscal transparency (IMF, 2011b, app. 4).

Figure 2. Two Measures of the U.S. Federal Government Deficit, 1995–2010

(Percent of GDP)



Source: U.S. Treasury, Financial Reports of the United States Government, various years.

Note: The budget surplus is a mainly cash-based measure, while the net operating surplus is the negative of "net operating cost," a mainly accrual-based measure from the government's financial statements.

Evidence that accounting choices can have a large impact also comes from governments, such as the United States, that publish alternative measures of the deficit. In 1995–2010, the U.S. budget deficit underestimated long-run costs as measured by the accrual measure by an average of 2 percent of GDP a year (Figure 2).[12] If changes in Medicare and Social Security commitments are counted in a still broader measure of U.S. fiscal performance, the average deterioration in the fiscal outlook in the last decade is larger still, but there was an enormous estimated improvement in 2010, associated with health-care reforms.

IX. Countering Accounting Devices

One way to counter the use of accounting devices is to make the headline measures of debt and deficit more reliable as indicators of public finances. Conceptually, the adoption and progressive improvement of accrual-based standards are central to the solution of the problems discussed in this note, because accrual-based measures seek, when other things are equal, to recognize transactions when economic value, not cash, is transferred. Thus, the

[12]This does not imply that cash surpluses are generally greater than accrual surpluses. In New Zealand in 2000–10, the cash surplus, measured as the sum of net cash flows disbursed to operations and investments, was usually less than the operating surplus in the income statement. (See data available at http://www.treasury.govt.nz/government/financialstatements.)

device of delaying a payday to the next year does not reduce an accrual-based deficit, because economic value is considered to be transferred when employees work, not when they are paid.

But there are difficult judgments to be made in accrual-based reporting about when exactly economic value is transferred. This creates new kinds of accounting problems and means that not all the problems of cash accounting are solved by the adoption of accrual accounting. As the above examples of pensions, operating leases, and public-private partnerships illustrate, there can still be opportunities under accrual-based standards for taking on more or less binding commitments to spend money without recognizing a liability. There will always be grey areas where commitments or near commitments can be made without recognizing a liability, but over time accrual-based standards have evolved so that more commitments are recognized as creating liabilities.[13] The IMF's *Government Finance Statistics Manual 2001* (IMF, 2001), for example, treats civil-service pensions as creating a liability, so that an expense must be recorded when employees accumulate pension benefits. And the new guide to debt statistics (IMF, 2011, ch. 4) explains that contracts for public-private partnerships can create long-term liabilities. To ensure that standards keep up with the use of new accounting devices, statisticians must have the resources and the independence to update the standards as problems become apparent.

Because accrual-based reporting requires difficult judgments, its application should be accompanied by careful checks to ensure that the judgments are reasonable. As well as having sufficient resources and independence, statisticians should be able to draw on reliable accounting data. To make government accounting data reliable, one can use the same tools that are used to improve the reliability of accounts in the private sector. Those include standard-setting by a body that is independent of any reporting entity, the preparation of an integrated set of financial statements (balance sheet, income statement, cash-flow statement, etc.) supported by detailed footnotes, audit by an independent auditor that states whether the financial statements offer a "true and fair" view, and civil and criminal sanctions for fraudulent reporting.

Improving the reliability of headline fiscal indicators is unlikely to be sufficient, however, because neither fiscal flows nor fiscal stocks can be adequately summarized by any one number (Blejer and Cheasty, 1991). The cash deficit is an insufficient indicator of fiscal performance (fiscal flows), but accrual indicators also conceal important developments,

[13]Whether recognition of a liability means that the deficit increases depends on whether the government receives an asset in return for assuming the new liability, as for example in the case of a lease or public-private partnership, and on the particular measure of the deficit. When the government receives a nonfinancial asset in return for assuming the liability, the government's net operating balance would not initially be affected but its net lending/borrowing would deteriorate.

including in the need for cash, and a cash-based indicator of the deficit that is much worse than the accrual-based indicator may serve as a warning that the estimates underlying the accrual indicator merit scrutiny. Thus, assessment of fiscal performance should pay attention to both cash and accrual indicators. Similarly, gross debt is an insufficient measure of the fiscal position (fiscal stocks), but the problem created by considering only gross debt cannot be remedied by considering only net debt or net worth.

The problems of looking at a single indicator of fiscal performance (*the* deficit) and a single indicator of fiscal position (*the* debt) are compounded when the indicators are the subject of fiscal targets. As Goodhart (1975) conjectured in the context of monetary policy, "any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes." Applied to fiscal policy, the problem is that fiscal indicators that are used in fiscal targets tend thereby to become less accurate as indicators. Thus it is essential to have alternative indicators of fiscal performance and fiscal position.

Long-term fiscal forecasts provide one set of alternative fiscal indicators. The archetypal accounting device reduces this year's deficit at the expense of higher deficits in future years. Thus one way of ensuring that fiscal reporting is more informative is to ensure that it includes estimates of future deficits (measured on the same basis) under current policy. To be effective, the forecasts must have a long horizon, perhaps 50 years. Otherwise, a government can still produce misleading reports by delaying the increase in the deficit to the year after the end of the forecast. In particular, the years beyond the forecast must be far enough in the future that fiscal performance in those years matters little from the point of view of the present. As in the United States, the forecasts may also be summarized in a kind of comprehensive balance sheet that gives the present values of categories of forecast spending and revenue (Table 3). Long-term forecasts cannot be expected to be accurate, but they can provide a useful best guess of the long-term effects of current policies. To increase their reliability, standards can be adopted for their preparation (IPSASB, 2011b).

Table 3. U.S. Federal Government's Summary of Long-Term Fiscal Projections 2010

(Present Values of 75-Year Long-Range Projections)

	Trillion dollars	Percent of 75-year GDP
Receipts	175	20.2
Social-security payroll taxes	38	4.4
Medicare payroll taxes	12	1.4
Individual income taxes	91	10.5
Other	34	4.0
Primary spending	192	22.1
Defense discretionary	31	3.6
Nondefense discretionary	31	3.6
Social security	49	5.7
Medicare A	17	2.0
Medicare B and D	20	2.4
Medicaid	24	2.8
Other mandatory	19	2.2
Receipts less primary spending	−16	−1.9

Source: U.S. Treasury, *Financial Report of the United States Government*, for year ending September 30, 2010.

Full sets of statistical statements—government operations, other economic flows, cash flows, and balance sheet—provide another set of alternative fiscal indicators. A suite of deficit indicators drawn from GFSM 2001would include the cash balance, net operating balance, net lending/borrowing, overall balance (IMF definition), [14] and change in net worth. Statistical financial statements should also be prepared for several definitions of government, including central government, general government, the nonfinancial public sector, and the public sector.

Indicators from accounting reports can be useful supplementary indicators when the headline indicators are drawn from fiscal statistics, and vice versa. In the United Kingdom, for example, the new accounts for the whole of government provide a valuable new perspective on public finances. Prepared according a modified version of International Financial Reporting Standards, the accounts recognize liabilities related to pensions and public-private partnerships that are not recognized in the country's fiscal statistics. The liability related to pensions is large (Table 2); that related to public-private partnerships is significant but much smaller, at 2 percent of GDP.

Effort is also required to make this kind of supplementary information intelligible and influential. A proliferation of new reports, memorandum items in statistical tables, and

[14]The IMF overall balance is an adjustment of net lending/borrowing that treats the proceeds of privatizations as the sales of financial assets (which do not affect the deficit) and subsidies given in the form of loans as an expense (IMF, 2001, p. 46).

footnotes in financial reports may disclose problems without galvanizing action to solve them. Analysts need to be encouraged to look at alternative measures and to analyze their significance. One option is to create an independent body that has the expertise and resources to analyze public finances in detail and the authority to draw the public's attention to fiscal problems not revealed in headline fiscal indicators. The Congressional Budget Office in the United States and the Office for Budget Responsibility in the United Kingdom are examples of such bodies. Another, complementary option is to require the production of tables that generate new fiscal indicators alongside traditional ones. Table 4 shows how a variety of deficit indicators can be presented for general government, the nonfinancial public sector, and the public sector, using data from Australia as an illustration.

Table 5 shows how debts, other contractual liabilities (e.g., civil-service pensions), and noncontractual obligations (e.g., pensions for the general public) can be shown in a single "comprehensive" balance sheet, along with corresponding rights, in a way that generates a broad measure of total obligations while recognizing that each kind of obligation has a different significance for fiscal analysis and merits separate attention.

Table 4. A Suite of Balance Indicators, Australia, 2009–10
(Percent of GDP)

	General government	Nonfinancial public sector	Public sector
Net operating balance	−2.9	−2.7	−3.2
Change in net worth	−0.4	−0.4	−0.4
Net lending/borrowing	−5.3	−6.4	−6.9
Cash balance	−5.1	−6.1	−6.4

Source: Australian Bureau of Statistics and, for GDP, IMF *World Economic Outlook*, September, 2011.

Note: The net operating balance is equal to revenues from transactions less expenses from transactions. Change in net worth is the net operating balance plus other changes in value, including holding gains and losses. Net lending/borrowing is the net operating balance less the net acquisition of nonfinancial assets. The cash balance is the net cash inflow from operating activities less the net cash outflow for investments in nonfinancial assets.

Table 5. A Comprehensive Balance Sheet

Nature	*Assets*	*Liabilities*	*Net Assets (Cumulative)*
Financial	Cash, bonds …	Debts …	Net financial worth
Nonfinancial meeting criteria for recognition	Land, buildings …	Contractual pensions …	Net worth
Nonfinancial not meeting criteria for recognition	Right to tax …	Other pensions, healthcare	Comprehensive net worth

Note: A full table would include subtotals for financial assets and liabilities and for total recognized assets and liabilities.

X. CONCLUSION

This note has documented a variety of ways that headline deficits can be reduced without improving public finances—either by deferring the reporting of spending or accelerating the reporting of revenue—thus creating an illusion of fiscal adjustment. It has also set out two broad strategies for preventing illusions: ensuring that headline indicators are, first, rigorously measured according to up-to-date accrual standards and, second, presented alongside alternative indicators of the deficit and long-term forecasts of the headline indicator.

These proposals undoubtedly create more work for government accountants and statisticians and, to be effective, would require fiscal analysts to come to grips with greater complexity. But the problems discussed in this note cannot be solved with the stroke of a pen. On the one hand, getting accurate data requires hard work, careful checks, and continually evolving standards. On the other, fiscal performance and the fiscal position are both multidimensional, and to be understood need to be viewed from more than one perspective. It is true that useful measures simplify, but as Einstein might have said "fiscal statistics should be as simple as possible—but no simpler."

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