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**How Much Progress Have Governments Made in
Getting Assets and Liabilities on Balance Sheet?**

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Abstract

When rights and obligations are not recognized as assets and liabilities on a government's balance sheet, the government's deficit can be reduced by selling off-balance-sheet assets or incurring off-balance-sheet liabilities. This paper examines how much progress has been made in recognizing assets and liabilities and thus dispelling the fiscal illusions that such transactions create. Looking at the accounts, government-finance statistics, and long-term fiscal projections produced in 28 advanced economies in the period since 2003, it finds good progress in the recognition of some assets and liabilities, such as accounts payable and simple financial assets, but much less in others, such as civil-service pensions.

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I. INTRODUCTION¹

Sometimes a government's accounting fails to deal adequately with its transactions, creating fiscal illusions. When the deficit is measured on a cash basis, for instance, delaying payments from late in the budget year to early in the next can create the illusion of savings. When the accounting does not deal satisfactorily with derivatives, an off-market swap can be used to reduce the reported deficit and debt without any real improvement in public finances (Piga, 2001). When all cash inflows are treated alike, and the proceeds of the sale of assets counts as revenue, the deficit gives a misleading view of the change in the government's position, a problem recognized more than a hundred years ago by Puviani (1903/1973, p. 88). More recently, many governments have chosen to invest by means of public-private partnerships, seemingly because these arrangements do not immediately affect their debts and deficits, even if the long-run effect on their finances is much the same as that of traditionally financed investment (Heald and Georgiou, 2011). When obligations to pay future pensions are not recognized as a liability, paying civil servants partly by offering them defined-benefit pensions can appear cheaper than paying them only in cash (Chan and Xu, 2012). If pension schemes are partly funded, and pension assets but not pension liabilities are recognized, a government can actually reduce its deficit by taking over private pension schemes (Koen and van den Noord, 2005). Traditional measures of the government's deficit and debt may also give no indication of looming fiscal trouble even though ageing and the rising cost of healthcare make the government's tax or spending policies unsustainable (Kotlikoff, 1986; Gokhale and Smetters, 2006).

Though illusions that flatter attract the most attention, unsatisfactory accounting can also make public finances look worse than they really are. Blanchard and Giavazzi (2007) show that treating investment in infrastructure as ordinary spending can be misleading, because the investment can have long-run fiscal benefits. DeLong and Summers (2012) show that in a depressed economy, when interest rates are close to zero and unemployment is high and causing lasting damage, even ordinary government spending may pay for itself in the long run.

Several studies have analyzed these problems. Easterly (1999) shows that countries required to reduce conventionally measured debts and deficits tend to meet their targets without really improving their finances: fiscal adjustment, he concludes, is often an illusion. Koen and van den Noord (2005) investigate the "fiscal gimmicks" used by members of the European Union in the period 1993–2003 and find that the effect of such devices is often large—in three of the 15 countries in their sample, the devices reduce the deficit by more than two-thirds of a

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per cent of GDP on average (see their Table A.1). IMF (2011) gives many more recent examples and argues that their use jeopardizes fiscal transparency.

Part of the solution to the problem, it has been argued, is to develop government balance sheets, to recognize a broad array of properly valued assets and liabilities on those balance sheets, and to measure the deficit as the decline in net worth, or the part of the decline due to transactions (e.g., Easterly, 1999; IMF, 2011; Irwin, 2012). Delaying payment, for instance, no longer reduces the deficit when accounts payable are recognized as a liability on the government's balance sheet, and the deficit takes account of the accumulation of those liabilities. Likewise, the sale of assets does not reduce the deficit if the assets are on balance sheet and the deficit is measured as the decline in net worth. Recognizing such assets and liabilities is consistent with the accrual-based version of International Public Sector Accounting Standards (IPSASB, 2014), the International Monetary Fund's *Government Finance Statistics Manual* (IMF, 2015), as well as many national and regional standards for fiscal data. Addressing the illusions discussed by Kotlikoff and by DeLong and Summers is more difficult. It is possible to include the present values of future taxes and government spending as assets and liabilities on an extended government balance sheet. Indeed, in considering how to reduce fiscal illusions, Easterly (1999, pp. 75–76) says his “ideal” balance sheet would also include the present value of “future tax receipts” and “implicit pension debt”. Standard-setters have shied away from such an approach, however, partly because of measurement difficulties. Nevertheless, long-term projections of future fiscal cash flows can at least be published.

This paper asks how much progress governments in advanced economies have made in recognizing assets and liabilities on their balance sheets. It looks specifically at progress since 2003, the first year in which the IMF published a *Government Finance Statistics Yearbook* that presented data in the form prescribed by the *Government Finance Statistics Manual 2001* (IMF, 2001), which, unlike its predecessor, provided for a balance sheet and an accrual-based operating statement. Although fiscal illusions can afflict countries of all levels of development—illusions arising from the discovery and depletion of oil reserves being crucial in some less-developed ones—the paper examines a group of developed economies that could be expected to publish high-quality fiscal information. More specifically, it examines the economies classified as advanced by IMF (2002, p. 159): Australia (abbreviated in the tables below by AUS), Austria (AUT), Belgium (BEL), Canada (CAN), Cyprus (CYP), Denmark (DNK), France (FRA), Finland (FIN), Germany (DEU), Greece (GRC), Hong Kong Special Administrative Region of China (HKG), Iceland (ISL), Ireland (IRL), Israel (ISR), Italy (ITA), Japan (JPN), Korea (KOR), Luxembourg (LUX), the Netherlands (NLD), New Zealand (NZL), Norway (NOR), Portugal (PRT), Singapore (SGP), Spain (ESP), Sweden (SWE), Switzerland (CHE), the United Kingdom (GBR), and the United States (USA). “Taiwan Province of China” was also classified as advanced, but is excluded from the sample for lack of data. The IMF describes its classification of countries as not “being based on strict criteria, economic or otherwise,” but as having “the objective of

facilitating analysis” (p. 175). Considering the classification in 2002 avoids the selection bias that could be caused by considering the classification today.

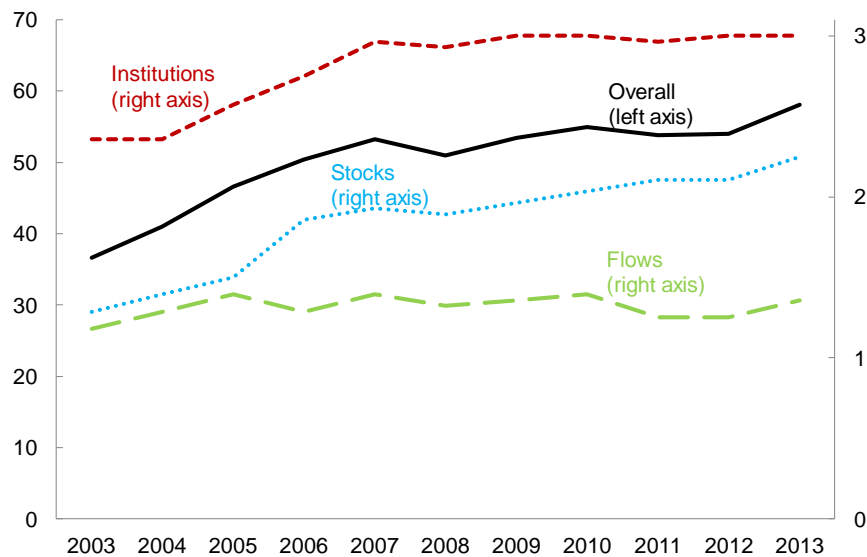
The paper concentrates on the reporting of government-finance statistics (GFS) to the IMF, but also examines the accounts (i.e., financial statements) and long-term fiscal projections published by central governments. Reported GFS are not always representative of the statistics available in a country; data may be published domestically, but not submitted to the IMF. Nor are GFS always important for fiscal policy; the testing of compliance with fiscal rules and targets may be based on budgetary accounts, for instance. But, because reported GFS follow a common template, they lend themselves to analysis of variation over time and among countries. It is much harder to compare accounts prepared in a multitude of languages and a myriad of formats. GFS also provide for consolidated data on general government (i.e., including subnational as well as central governments) in contrast to budgets, which are often prepared only for a subset of central government. GFS and accounts are partly alternatives—if a single measure of the central government’s deficit is needed, the data can come from GFS or accounts, but not both—and there is a debate about which source is more useful (Ball and Pflugrath, 2012 and Barton, 2011; see also Blondy *et al.*, 2013, and Chan and Xu, 2013). But there is value in having both. When accounts are consolidated according to control, there may be no alternative to GFS for data on general government. GFS are also suited to macroeconomic analysis because of their alignment with statistics for other sectors of the economy. At the same time, GFS are unlikely to be very accurate unless they are based on accrual accounts (European Commission, 2013).

II. AN OVERVIEW OF CHANGES IN ACCOUNTS AND GFS

Before examining the recognition of particular assets and liabilities, it is useful to have an overview of how accounts and GFS have changed since 2003. Figure 1 shows some measures of the average comprehensiveness of GFS, based on work reported in Wang, Irwin, and Murara (2015). The dashed line at the top of the figure indicates the comprehensiveness of the coverage of public institutions. It shows whether statistics are produced for general government (assigned a score of 3), for central government but not general government (2), for budgetary central government but for no broader definition of government (1), or not produced at all (0). Now, all 28 economies report data for general government. The dotted line labelled “stocks” paints a high-level picture of the development of GFS balance sheets. It shows the average number of items reported in the summary balance sheet, where the maximum is three: liabilities, financial assets, and nonfinancial assets. The average advanced economy now reports just over two items; many report a financial balance sheet (i.e., liabilities and financial assets). The dashed line at the bottom shows how many of the flow statements of GFS are published, where the maximum is again three: a statement of the sources and uses of cash, an accrual-based statement of government operations, and a statement of other economic flows, which shows holding gains and losses and other changes in the value of assets and liabilities arising outside transactions. Here, there has been little progress: most economies in the sample still report only one of these statements. Part of the

reason is that some moved from cash-only to accrual-only reporting, not from cash-only to cash-plus-accrual. Only Hong Kong SAR reports all three flow statements. The solid black line shows an index (ranging from 0 to 100) of the overall comprehensiveness of GFS, where the most comprehensive statistics would include a full balance sheet and all three flow statements, each for general government.

Figure 1. Comprehensiveness of GFS for Advanced Economies, 2003–13



Sources: *Government Finance Statistics Yearbooks*, 2003–2013; see Wang, Irwin, and Murara (2015).

Looking at GFS in a different way, we can characterize the kind of data that each economy submitted for general government for the 2003 and 2013 *Yearbooks* (IMF, 2003, 2014). In doing so, we examine just the endpoints of the time period under consideration, but Figure 1 suggests that these are not very different from the adjacent years. In Table 1, an economy is counted as reporting *full-accrual* accounts if it reports liabilities, financial assets, and nonfinancial assets in the summary balance sheet and the net operating balance in the statement of government operations (a deficit that measures change in net worth due to transactions). It is counted as reporting *financial-only* accounts if it does not meet these criteria, but reports liabilities and financial assets in the summary balance sheet and net lending/net borrowing in the statement of government operations (a deficit that measures change in net *financial* worth due to transactions). Finally, it is counted as reporting *cash-only* accounts if it does not satisfy these criteria but reports a statement of the sources and uses of cash, including a cash deficit. Only data no more than two years old are considered (so, for the 2013 *Yearbook*, for instance, data for 2010 and before are ignored). As the Table shows, many economies failed to report timely data for general government for the 2003 *Yearbook*. All of these, however, now produce financial-only or full-accrual accounts. All the sample countries that are part of the European Union now report financial-only accounts, while 10 others now produce full-accrual accounts. Two countries, Israel and Singapore,

produced cash-only accounts in both 2003 and 2013. As noted earlier, the fact that a GFS item is not reported to the IMF does not imply that it is not published. Though the United Kingdom did not submit an estimate of nonfinancial assets to the IMF, the UK Office of National Statistics did publish one (ONS, 2013, Table 5.1.9).

Table 1. GFS for General Government: Nature of Accounts, 2003 and 2013

	None in 2013	Cash only in 2013	Financial only in 2013	Full-accrual in 2013
None in 2003			CYP FRA GRC ITA LUX PRT ESP	CAN HKG IRL JPN KOR NZL NOR
Cash only in 2003		ISR SGP		CHE USA
Financial only in 2003			AUT BEL DNK FIN GER ISL NLD SWE GBR	
Full-accrual in 2003				AUS

Sources: IMF (2003, 2013).

Further evidence of change can be found in the accounts published by central governments. Just before the period under examination, Heald (2002, p. 11) wrote of a “global revolution” in which traditional government cash accounts were being replaced by accrual ones. Table 2 records the playing out of this revolution (see also Blondy *et al.*, 2013, and Chan and Zhang, 2013). The table shows that eight of the 28 governments in the sample published accounts that included a balance sheet and an accrual-based operating statement in 2003, while 16 do now. In the two-by-two matrix of this table, and those below, the number of economies in the right-hand column indicates performance today, while the difference between the number in the top-right cell and the number in the bottom-left cell indicates the extent of progress. Not surprisingly, many governments that submit full-accrual GFS also publish accrual accounts. Ireland and Norway are exceptions to this rule.

Table 2. Availability of Accrual Accounts for Central Government

	Not available now	Available now
Not available in 2003	BEL CYP DEU GRC IRL ITA LUX NLD NOR PRT SGP	AUT DNK FRA HKG ISR JPN CHE GBR
Available in 2003		AUS CAN ESP ISL* FIN NZL SWE USA

Notes: * Accounts do not recognize nonfinancial assets. Missing: Korea.

Determining what counts as accrual accounts is tricky, and the classification of Table 2 could be contested. For instance, the accrual accounts of Japan, Hong Kong SAR, and Israel are not the official audited accounts, but they are nevertheless counted. (Table 3 describes some of the features of the accrual accounts that are available now). By contrast, the Italian government publishes an annual document (*Il patrimonio dello stato*) that shows the balance sheet of the state, along with information on revenue and spending; this might be counted as a set of accrual accounts, but Table 2 excludes it. More generally, negative existential claims are hard to verify, so “not available” might better be described as “not found.” For the EU members in the sample, two reports commissioned by Eurostat provide some corroboration. Ernst & Young (2012, p. 21) describes all the central governments of the EU members in the right-hand column of Table 2 as using accrual accounting, and PWC (2013, p. 36) gives these governments higher scores for “accounting maturity”—meaning readiness to adopt International Public Sector Accounting Standards—than any of the EU countries shown in the left-hand column. The two reports cast doubt, however, on the classification of Belgium: Ernst & Young describes the central government as using accrual accounting and PWC gives it a higher score for accounting maturity than any of the other EU members in the left-hand column.

Table 3. Selected Features of Available Accrual Accounts

Economy	How many months after the end of the year are accounts published?	If audit opinion is not in report, how many months later is it published?	Are similar interim statements published?	Is there a cash-flow statement?	Is the deficit reconciled with change in net worth?	Are all controlled entities consolidated?
Australia	5	In report	Monthly	Yes	Yes	Yes
Austria	9	^a	No	Yes	Yes	No
Canada	7	In report	No	Yes	Yes	No
Denmark	3	6	No	No	Yes	No
Finland	3	2	No	Yes	Yes	No
France	5	0	No	Yes	Yes	No
Hong Kong SAR	8	Not audited	No	Yes	No ^d	No
Iceland	6	In report	Monthly	Yes	Yes	No
Israel	5	Not audited	No	Yes	No	No
Japan	12	Not audited	No	Yes	Yes	Yes
New Zealand	3	In report	Monthly	Yes	Yes	Yes
Spain	10	12	No	Yes	Yes	No
Sweden	3	1	No	Yes	Yes	No
Switzerland	3	3	No	^b	Yes	No
United Kingdom	12	In report	No	Yes	Yes	Yes ^e
United States	5	In report	No	^c	Yes	No

Notes: ^aReport published by auditor (Der Rechnungshof). ^bThe *compte de financement et compte des flux de fonds* provide similar but not purely cash-based information. ^cThe statement of net operating cost is reconciled with the mainly cash-based budget report. ^dThe surplus shown on the statement of financial performance is, however, very close to the increase in net worth shown on the statement of financial position. ^eThe accounts of the United Kingdom are the only ones shown here that consolidate local governments (on which, see Heald and Georgiou, 2009).

III. SPECIFIC ASSETS AND LIABILITIES

We can turn now to the recognition of particular assets and liabilities. The classification of the GFS balance sheet makes it most helpful in assessing progress in recognizing accounts payable and receivable, financial investments such as shares in public corporations, nonfinancial assets such as land and buildings, derivatives, and defined-benefit pensions for government employees. Others assets and liabilities, such as those created by public-private partnerships, can be recognized in GFS balance sheets, but the classification does not facilitate inferences about whether or not they are.

All the 16 governments shown in the right-hand column of Table 2 now recognize accounts payable and receivable and report an accrual measure of the deficit. Similarly, the economies reported in Table 1 as producing financial- or full-accrual GFS for general government produce an accrual measure of the deficit and generally recognize accounts payable and receivable. Yet Table 1 considers only the summary GFS balance sheet. Table 4 considers the full balance sheet. It looks for economies where both accounts payable and accounts receivable, as well as revenue and expense, are available. In a few cases, zero or very low values are reported, suggesting that the data are incomplete; the Table treats data on accounts payable and receivable as unavailable when the amounts are less than 2 percent of expense and revenue, respectively. (The average values in 2013 are 15 and 17 percent.) For 2013, this threshold excludes Austria, Cyprus, Germany, and Luxembourg. Luxembourg reports a zero value. Austria and Germany, which report amounts equal to 1.6 and 0.3 percent of expense, respectively, did not report “trade credits and advances” for Eurostat (2012). Cyprus did, but the amounts were much lower as a percentage of GDP than those reported by other countries. Even with these exclusions, the data imply significant improvement: data were available for 22 of the 28 countries in 2013, compared with only seven in 2003.

Table 4. GFS for General Government: Other Accounts Receivable and Payable

	Not available in 2013	Available in 2013
Not available in 2003	AUT CYP DEU ISR LUX SGP	BEL CAN FRA GRC HKG IRL ITA JPN KOR NZL NOR PRT ESP CHE USA
Available in 2003		AUS DNK FIN ISL NLD SWE GBR

Sources: IMF (2003, 2013).

It has become standard to recognize financial assets, such as shares in state-owned enterprises and other companies. All the accounts of the governments shown in the right-hand column of Table 2 recognize financial assets. In addition, all the governments shown as now producing financial-only or full-accrual GFS in Table 1 report financial assets as well as a measure of the deficit unaffected by the sale or acquisition of such assets.

Information on nonfinancial assets is less prevalent, but has also improved. All the accounts of the governments shown in the right-hand column of Table 2 recognize nonfinancial assets on the balance sheet, except those of Iceland (one of the early adopters of accrual accounting). For GFS, all the economies shown in Table 1 as reporting full-accrual GFS for general government (10 in 2013) report a total value for nonfinancial assets, as well as a measure of the deficit unaffected by the sale or acquisition of such assets. In some countries, however, there is a total value but no breakdown by type. Table 5 applies a stricter criterion and counts only those countries where there is some detail, reducing the number of economies with the information to seven—still a significant improvement over 2003.

Table 5. GFS for General Government: Nonfinancial Assets

	Not available in 2013	Available in 2013
Not available in 2003	AUT BEL CAN CYP DNK	
	FIN FRA DEU GRC ISL IRL	HKG JPN KOR
	ISR ITA LUX NLD PRT	NZL NOR CHE
	SGP ESP SWE GBR USA	
Available in 2003		AUS

Sources: IMF (2003, 2013).

Information on derivatives has also improved, but remains unsatisfactory (Table 6). Many central governments' accrual accounts recognize derivatives as assets or liabilities on the balance sheet. There has also been progress in the reporting of GFS: 15 economies reported nonzero values for the derivatives of general government in 2013, whereas only two did in 2003. Zero values can of course arise if no entity in general government has outstanding derivative contracts. In many cases, however, the zeros reflect incomplete reporting: sometimes, a zero on the balance sheet is accompanied by a nonzero value for transactions in derivatives in another GFS table; at other times, the accounts of the central government, or some other entity in general government, reveal the use of derivatives.

Table 6. GFS for General Government: Financial Derivatives

	Zero or not available in 2013	Nonzero in 2013
Zero or not available in 2003	AUS BEL CAN CYP	AUT DNK FRA DEU
	HKG ISL ISR LUX NZL	GRC ITA IRL JPN KOR
	NOR SGP ESP USA	NLD PRT SWE CHE
Nonzero in 2003		FIN GBR

Sources: IMF (2003, 2013).

Progress in reporting liabilities for defined-benefit pensions for government employees has been limited. Liabilities for the unfunded part of such pensions are recognized on the face of the balance sheet of at least eight central governments in the sample: those of Australia, Canada, Iceland, Israel, New Zealand, Sweden, the United Kingdom, and the United States. In the case of Israel and the United Kingdom, this is an improvement relative to 2003. In GFS, pensions for government employees should be shown under the heading "insurance technical reserves" unless there is no defined-benefit pension scheme for past or present government employees or all government employees are covered by the same system as applies to private-sector employees. Most economies, however, report a zero or missing value for insurance technical reserves (Table 7). The number of economies reporting amounts under insurance technical reserves large enough to be employee pensions was 2 in 2013 and 6 in 2013. In addition, New Zealand appears to have reported a liability, but under

the heading of other accounts payable (compare its data for central government in the 2013 *Yearbook* with Statistics New Zealand's 2013 and 2014 releases of GFS for central government).

Table 7. GFS for General Government: Pensions for Government Employees

	Zero or not available in 2013	Available in 2013
	AUT BEL CYP DNK FIN FRA DEU GRC IRL ISR	
Zero or not available in 2003	ITA JPN KOR LUX NLD NZL NOR PRT SGP ESP SWE CHE GBR	CAN HKG USA
Available in 2003		AUS ISL

Sources: IMF (2003, 2013).

Table 8 summarizes progress in the recognition of the particular GFS assets and liabilities considered here.

Table 8. Summary of GFS Recognition in 2003 and 2013

(Number of economies out of 28)

	Recognized in 2003	Recognized in 2013	Increase
Accounts payable and receivable	7	22	15
Nonfinancial assets	1	7	6
Derivatives	2	15	13
Employee pensions	2	5	3

Source: Tables 4–7.

What about pensions for the public and other social spending that creates an implicit liability? No accounting or GFS balance sheet includes such a liability, or any asset related to future tax revenue—though the US government, following the requirements of FASAB (2009), discloses these amounts in a note. The 2013 GFS *Yearbook* includes a memorandum item for “obligations for social security benefits,” but no country in the sample provided the relevant data. Many governments, however, now publish long-term projections of the associated cash flows. Table 9 shows whether a routinely published projection, no more than four years old, covering at least 30 years, and including forecasts of the debt or deficit, was available in 2003 and whether such a projection is available now. In 2003, only seven such projections appear to have been available; now, 15 are. Some other countries publish

projections of spending and revenue items particularly sensitive to aging, even if they do not project the deficit or debt.

Table 9. Availability of Projections of Deficit or Debt of at Least 30 Years

	Not available now	Available now
Not available in 2003	BEL CYP FRA GRC HKG ISL IRL ISR KOR LUX PRT SGP ESP	AUT CAN DNK DEU ITA JPN NZL CHE
Available in 2003		AUS FIN NLD NOR SWE GBR USA

Note: Data collected with Csaba Feher.

IV. CONCLUSION

In summary, there has been substantial progress in getting assets and liabilities on balance sheet and in generating measures of the deficit that properly account for transactions in those assets and liabilities. Yet much remains to be done to dispel fiscal illusions. The recognition of the more straightforward assets and liabilities is widespread, but many other assets and liabilities remain off balance sheet in many countries. And, of course, the data may not be of high quality even when assets and liabilities are recognized. Eurostat’s scrutiny of European GFS (e.g., European Commission, 2015) provides some quality assurance. Elsewhere, there may be little external scrutiny. As for central governments’ accounts, in only a few countries are they audited, comprehensive, timely, and accompanied by similar interim statements (Table 3). When these conditions are not met, their relevance to fiscal analysis tends to be diminished. Finally, recognition and accurate measurement of the assets and liabilities discussed here will not eliminate fiscal illusions. Many years ago, when US municipalities were adopting private-sector-like accounting that corrected some problems but didn’t require the recognition of liabilities in relation to financial leases, Greene (1980, p. 59) noted that following a new set of accounting standards was “sort of like learning a foreign language—you tend to pick up the swear words first”. Closing the loopholes created by the non-recognition of GFS assets and liabilities will no doubt encourage the search for others.

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