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The Case for Accrual Recording
in the IMF's Government Finance Statistics System

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Abstract

This paper investigates whether the planned revision of the IMF's A Manual on Government Finance Statistics should advocate an accrual basis of recording over the essentially cash basis of recording in the previous manual. The paper concludes that the revised manual should advocate an accrual basis in order to address deficiencies of the existing modified cash basis and enable a greater degree of harmonization with other macroeconomic statistical systems. The paper suggests a strategy that would enable countries to move progressively to compiling an extensive range of accrual information reconciling data on economic and financial flows and stocks.

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Summary

In revising the Fund's 1986 A Manual on Government Finance Statistics (GFS Manual) the question arises whether to recommend accrual or some other basis instead of the GFS Manual's mainly cash basis of recording. The present modified cash basis of recording was adopted because cash data were considered the best approximation of the flows of funds and resources and were available in most government records. However, users have criticized the system, because it does not provide adequate information.

Based on surveys of users and compilers and on other research, the paper concludes that from a conceptual viewpoint an accrual system based on the 1993 System of National Accounts with supplementary cash information, *such as the cash deficit, would be the most appropriate system.* An accrual basis would overcome deficiencies of the current system.

The paper suggests a strategy to reconcile what is conceptually desirable with what can be achieved in practice, now and into the future. The strategy would allow countries to move through defined stages to a final accrual system that reconciles all economic stocks and flows, as recommended in the 1993 System of National Accounts. Supplementary information on cash flows and balances would be included. The strategy recognizes that more accrual data will become available over time and that countries will be able to move progressively, although at different rates, to compile the full range of information defined for the system.

I. Introduction

1. Background

Among the more important issues to be considered in the revision of the International Monetary Fund's (IMF's) A Manual on Government Finance Statistics (GFS Manual) is the question of the recording basis to adopt. The present manual recommends essentially a cash basis of recording. The alternatives most often advanced are the "due-for-payment" basis and the "accrual" basis. Some of the main deficiencies users see in the current GFS Manual arise because the system uses a cash basis of recording.

Apart from addressing these deficiencies, there are two reasons for giving serious consideration to adoption of an accrual basis of recording in the system. Firstly, the accrual basis is the recording basis used in the System of National Accounts (1993 SNA) and other systems. There are advantages to aligning the GFS Manual as closely as possible with the 1993 SNA and with the Fund's fifth edition of the Balance of Payments Manual (BPM) and the upcoming Manual on Monetary and Financial Statistics—both of which are harmonized with the 1993 SNA and employ an accrual basis of recording. Secondly, a small but increasing number of countries has adopted accrual accounting for their main financial reports, and accounting bodies are encouraging this trend as a means to improve financial management in government. Because government accounts are the main source of information entering the GFS system, the revised manual should adopt the recording basis that appears likely to be used most widely in government accounting in the future.

2. Aim of the paper

The paper aims to make the case for changing the recording basis in the revised GFS Manual from cash to accrual. The paper examines the nature of the cash, due-for-payment, and accrual bases of recording and describes their advantages and disadvantages as potential recording bases for the revised GFS system. It reports on aspects affecting the choice of recording basis and, finally, describes a strategy that would enable countries to move progressively to a full accrual basis without placing undue burden on countries not yet in a position to adopt a full accrual system.

II. Nature of Recording Bases

1. The meaning of "recording basis"

The term "recording basis" is used in its most limited sense to refer to the time at which transactions (see definition in II.2 ahead) are recorded. While the time of recording is the critical factor defining alternative recording bases, it is necessary to recognize the different impact of alternative recording bases on the provision of information on stocks or balances and on the types of economic flows recorded. As will

become evident from the discussion ahead, each recording basis is defined in such a way that the stocks recorded under each basis are different, as are the types of flows recorded. Recording basis therefore should be taken as referring not only to the time of recording of economic flows but also to the scope of the stocks recorded and to the range of different types of economic flows encompassed.

2. The nature of "economic flows," "stocks," and "transactions"

The 1993 SNA provides (on page 20) a useful framework for defining these concepts. It describes "economic flows" as events that "create, transform, exchange, transfer, or extinguish economic value" and as involving "changes in the volume, composition, or value of an institutional unit's assets or liabilities." Assets and liabilities constitute the "stocks" in the system. *Assets are stores of economic value that can be used to derive economic benefits, and liabilities are the financial claims of others.* The values of assets and liabilities are presented in a "balance" sheet, which is "balanced" by the difference between the value of assets and liabilities, called "net worth."

The concept of a "transaction" is central to the definition of recording bases because, as has already been noted, the time at which transactions are recorded mainly defines the different recording bases. A transaction is defined in the 1993 SNA (page 72) as follows:

A transaction is an economic flow that is an interaction between institutional units by mutual agreement ^{1/} or an action within an institutional unit that is analytically useful to treat like a transaction, often because the unit is operating in two different capacities.

This definition therefore includes events involving (1) the reporting entity and others, and (2) the reporting entity alone, for example, consumption of fixed capital. The reference to units "operating in two different capacities" is based on the notion that transactions involving the unit alone can involve the unit undertaking economic activity that could have been contracted to another unit, for example, own account capital formation.

Transactions so defined are distinguished from "other economic flows," which are events other than transactions that "create, transform, exchange, transfer, or extinguish economic value." These include valuation changes,

^{1/} The reference to "mutual agreement" is not intended to exclude imposed interactions such as the payment of taxes but is rather intended to exclude economic flows resulting from unilateral actions by one institutional unit affecting the economic well-being of others without their consent, such as seizure of assets. Some of these flows are recorded in the system but as "other economic flows" rather than as transactions.

depletion of natural resources, write-offs, natural growth of resources, etc. ^{1/} They are generally events that involve only the reporting entity. They differ from transactions in that they are often "balance day adjustments" or amounts that are calculated and applied at the end of the accounting period. Changes such as revaluations occur continuously over the accounting period rather than as discrete events and are attributed to the accounting period in which they occur.

These concepts of the different types of economic flows and stocks used in the 1993 SNA are used in this paper. Thus, the term transaction is used to include "internal" transactions or transactions within a unit such as depreciation and own account capital formation, as well as "external" transactions with other units. Transactions so defined are distinguished from other internal economic events, which are designated as other economic flows. As the discussion proceeds, it will be evident that *different types* of transactions need to be recognized, apart from the internal and external transactions already identified. For example, the distinction between "cash" or "monetary" transactions and "in-kind" and "barter" transactions is important in distinguishing different recording bases.

3. The three main recording bases

As noted, recording bases are defined mainly according to the time at which they record transactions. Transactions can involve a range of events, any one or more of which might be entered in the accounts of the recording entity as a record of the transaction. The events associated with a transaction typically occur in a chronological sequence that can influence the choice of recording basis. Typical events include ordering, delivery, and payment. Any one of these might be chosen to represent a record of a transaction. The recording entity's choice of recording basis among the events or stages associated with transactions usually depends on the purpose of the financial reports it prepares. A range of reports might be prepared to serve different purposes. For example, for the purpose of controlling cash flows and managing its liquidity position, the recording entity might record receipts and payments when cash or checks are received or paid. It might also record deliveries of goods in order to control its holdings of physical assets. It might record revenue and expenditure when due for payment to control the level of its contractual claims and obligations. The entity may have to choose particular recording bases to comply with regulatory and other requirements, for example accounting standards.

While it is possible to define particular recording bases with some precision, this does not mean that any one of these bases will necessarily be found in exclusive use by individual reporting entities. A mixture of features of the various recording bases is likely to be used. In particular, a government may record different transactions at different

^{1/} These events are all of the type included in the "other changes in assets account" and "revaluation account" of the 1993 SNA.

times but still report that it employs a single recording basis. These points are made to emphasize that the definitions of recording bases given ahead are generic and that considerable variation will occur in practice in the way the recording bases are applied.

For the purpose of this paper only three basic recording bases are considered: the cash basis, the due-for-payment basis, and the accrual basis. While other bases could possibly be defined, it is very likely that they would be variations on these three main bases, which are most often put forward as the options that should be considered for application in the revised GFS Manual. Working definitions of these three bases are given in the following paragraphs. These definitions are based on descriptions of the recording bases in the literature reviewed and represent a view of the "purest" form of each basis. The definitions provide a convenient base from which to consider the issues involved in the choice of a standard recording basis. They have no other status.

Under the cash basis of recording, transactions are recorded only when payment is made or received. Only transactions in which cash is the medium of exchange are recorded, so "transactions in kind," in which goods or services are exchanged for other goods or services (i.e., barter), or given or received with nothing in return, are not recorded. Internal transactions and other economic flows, in which only the reporting entity is involved, are also not recorded. In the strictest theoretical sense, the only stocks recorded in the cash basis of recording are cash balances held at the end of the accounting period. In practice, however, other balances such as debt balances will often be recorded.

Under the due-for-payment basis of recording, transactions are recorded when receipts or payments arising from the transactions fall due. The due-for-payment basis is generally defined as a variation of the cash basis, in which case transactions in kind, internal transactions, and other economic flows are not recorded. The stocks recorded are restricted to cash balances and amounts due or overdue for payment on all prior transactions.

Under the accrual basis of recording, all transactions and other economic flows, whether in cash or in kind, are recorded. Transactions are recorded at the time economic value is created, transformed, exchanged,

transferred, or extinguished. 1/ At the end of the accounting period the values of all assets, liabilities, and net worth are recorded. Accounting standards and the 1993 SNA provide guidance on how this general definition is to be applied in practice to various types of transactions. For example, the 1993 SNA (paragraph 3.94) says:

This means that flows which imply a change of ownership are recorded when ownership passes, services are recorded when provided, output at the time products are created, and intermediate consumption when materials and supplies are being used.

An understanding of the alternative recording bases and their relationships can be fostered by comparing the times at which the bases would record various types of transactions. *This comparison is made in the following paragraphs assuming the existence of a perfect world in which each basis can be applied precisely as in the definitions above.* In practice, of course, the actual time of recording will depend on the stages of each transaction at which records are kept.

In the case of the simplest form of transaction—a purchase of goods and services by the government for cash, with no extension of credit and immediate payment by the government—all three recording bases should record the transaction at the same time. In the event that the government delays payment, the accruals and due-for-payment bases will record the transaction at the same time 2/ but ahead of the cash basis, which will record the transaction only when the government eventually pays. If the entity from which the government is purchasing the goods and services extends credit to the government, the accruals basis will record the transaction ahead of the due-for-payment and cash bases, which will both record it at the same (later) time, provided the government pays on time.

In general, therefore, the accruals basis will record transactions at the same time or before the cash and due-for-payment bases. A possible

1/ This is the definition used in the 1993 SNA. Accounting standards emphasize different aspects, for example:

The essence of accrual accounting is the recognition in accounting records of the financial effects of events and transactions at the time those events occur or over the period during which they occur, as the case may be. These financial effects may take place independently of cash transactions, but they also include cash transactions (Australian Accounting Research Foundation (1994), paragraph 26).

2/ This is true in this very simple case, but in practice many transactions recorded on an accrual basis will be recorded sooner than they would be on a due-for-payment basis, for example, because delivery will precede payment falling due.

exception concerns prepayments. If the government makes a prepayment, both the cash and accruals bases would record the cash payment, but the accruals basis would treat the prepayment as the acquisition of a financial asset and not as a purchase (because the goods and services will not have been delivered). ^{1/}

The due-for-payment basis would generally record transactions at the same time as or before the cash basis would. (It is assumed that, in a due-for-payment system, where a payment is made before it is due, a transaction is nevertheless recorded when the cash is received). The difference between transactions for a given entity recorded on a due-for-payment basis and on a cash basis represents the increase (or decrease) in "arrears" (broadly defined) of that entity over the accounting period, assuming there are no leads or lags in recording cash flows.

III. Discussion of Recording Basis in Present GFS Manual

1. Basic rationale for cash basis

Chapter II of the present GFS Manual recommends that, for government finance statistics, data should be recorded as close as possible to the stage of cash receipts and cash payments. The manual (Section II.A.2) states that the cash basis is preferred as a measure of "aggregate government impact on the monetary accounts and the rest of the economy." In the same section, it also says that:

Payments data represent the best ready approximation of the flows of funds and resources; they avoid problems of valuing resource flows; they correspond most closely with other financial statistics; and they constitute the basis on which most governments keep their accounts.

2. GFS Manual's view of accrual accounting

The GFS Manual defines accrual accounting (in its glossary) as follows:

An accounting method in which revenues, expenses, lending and borrowing are recorded when they are earned, accrued, or incurred regardless of when payment is made or received.

^{1/} In the accrual system in the 1993 SNA, some transactions that might be thought of as prepayments are not treated as such; for example the deductions of "pay as you earn" (PAYE) tax payments from employees' salary payments are treated as actual payments of tax. Progress payments on construction projects are similarly not treated as prepayments, given that the payments relate to production in the form of work in progress.

In contrasting the cash and accrual bases, the manual (Section II.A.3) says of accrual concepts:

Such concepts are generally not applicable to government, and a full knowledge of liabilities accruing to and from government is not possible.

The manual illustrates this point by referring to the fact that governments cannot know the amount of tax payable by taxpayers that is accruing as the taxpayers earn taxable income. It notes that similar constraints apply to governments' knowledge of accruing liabilities to pay unemployment and disability benefits. The GFS Manual makes these observations partly from a standpoint that the impact of imputed transactions on economic events is different from the impact of cash transactions that have an immediate, visible, economic effect.

The manual (Section II.A.3) goes on to say that the accrual concepts of income and net worth are "not meaningful for government." It recognizes that management of government finances requires data on government debt and government claims on others but states that the combination of these with the value of a government's fixed assets "does not yield a total 'net worth' useful for either government housekeeping purposes or for macroeconomic policy purposes."

3. Response to current GFS Manual's dismissal of accrual accounting

The argument that governments cannot know all the liabilities accruing to and from them is irrefutable but takes a view of the concept of accrual that is broader than the concepts applied in practice. As discussed below, the concepts applied in accounting standards and in the 1993 SNA require documentary evidence that an asset or liability has accrued.

Accounting standards require that the government must have gained control over accruing revenue before it can be recognized and that the amount of accrued revenue must be capable of reliable measurement. "Control" in this context is defined as:

Capacity of the entity to benefit from the asset in the pursuit of the entity's objectives and to deny or regulate the access of others to that benefit (Australian Accounting Research Foundation, 1993).

With regard to the recognition of liabilities, the Australian Accounting Research Foundation goes on to state that a government does not have a liability in relation to social welfare benefits "until the criteria that are applicable in determining the eligibility to receive these benefits are met by external parties."

It also states that the general approach is to adopt measures that are as close to the desired concept as possible but nevertheless meet standards of objectivity and reliability. For example, the accounting standards say, in relation to measuring taxation revenue, that "for reasons of practicality, a government may adopt bases of recognition, for each major type of tax revenue, that attempt to approximate the point of time when both control over the related assets is obtained and recognition criteria are met."

In relation to the same topic, the 1993 SNA (paragraph 7.59) says:

Some economic activities...which under tax legislation ought to impose on the units concerned the obligation to pay taxes, permanently escape the attention of the authorities. It would be unrealistic to assume that such activities, transactions, or events give rise (immediately) to financial assets or liabilities in the form of payables or receivables. For this reason, the amounts of taxes to be recorded in the System are determined by the amounts due for payment only when evidenced by tax assessments, declarations, or other instruments...nevertheless, in accordance with the accrual principle, the times at which the taxes should be recorded are the times at which the tax liabilities arise.

The general principle applied in the 1993 SNA is therefore to require sound documentary evidence of the transactions and, where the records are not created at the precise time of accrual, to ensure that the record of the transactions is allocated to the accounting period in which accrual occurred.

The GFS Manual's argument that the accrual concepts of income and net worth are "not meaningful for government" remains a contentious issue more than a decade after the manual was written. For example, Blejer and Cheasty (1993), on page 294, conclude that "the jury is still out on whether net worth calculations of the deficit are superior to traditional flow measures." Their examination of the issue emphasizes the difficulties of valuing some government physical assets and questions the relevance of doing so when the assets are unlikely to ever be sold. They also cite difficulties with measuring the concept of governments' power to tax.

Nevertheless, they do not suggest that efforts to measure government net worth should be abandoned and say that awareness of deficiencies in the traditional flow measures of the deficit has focused attention on balance sheet measures such as net worth.

The conceptual and measurement problems associated with measuring government net worth have not dissuaded the authors of the 1993 SNA from including full government balance sheets and net worth in the central framework of the national accounts. The 1993 SNA (paragraph 13.4) argues that balance sheets integrated with flow accounts "encourage analysts to

look more broadly in monitoring and assessing economic and financial conditions and behavior."

The examples it gives of uses of balance sheet information possibly apply more directly to households and corporations but can apply to government. They include use in calculation of consumption and savings functions, computation of performance ratios using balance sheet items, monitoring the stock of economic and natural resources, and use of balance sheet items in analyses of productivity.

IV. Problems with Current Recording Basis

1. Shortcomings of cash basis in general

The current GFS Manual employs a cash basis of recording that has been modified to address some of the shortcomings of a "pure" cash basis. It is nevertheless useful to examine the theoretical shortcomings of a "pure" cash system before looking at the problems that users have cited as arising from the basis of recording employed in the current GFS Manual.

By definition, a cash basis records transactions only when cash payments are made. It therefore does not measure all economic events as they occur. As a system to measure economic activity, it suffers from built-in lags. A cash system does not provide information about revenues and expenses that have accrued but are not yet due for payment or are overdue for payment (i.e., "arrears"). It cannot, therefore, be used effectively to anticipate future solvency and cash flow problems. It records purchases and sales of capital items as single payments when those payments are made, without recognizing that the items have a useful life beyond the current accounting period. A cash system does not record the values of physical assets nor the progressive consumption of those assets and the emerging need to replace them. It does not record transactions in kind and other economic flows (as defined in the 1993 SNA), such as valuation changes, depletion of natural resources, write-offs, etc. The only balance sheet items recorded are cash balances, although in modified cash systems such as in the current GFS Manual, debt is also recorded.

2. Specific shortcomings cited by users

a. Arrears

The current GFS system's failure to provide adequate information about arrears is possibly the most often cited shortcoming of the system that is attributed to its cash recording basis. While the shortcoming applies to arrears on both receipts and payments, it is the arrears on payments that give most cause for concern. Critics appear to want both a measure of the accumulation of arrears in flow data and a measure of the level of arrears in stock data. There is also a need seen to distinguish between arrears arising from inherent delays in the payments system and "genuine" arrears

arising from a deliberate policy to withhold payment or a chronic inability to meet payments on time.

As already noted, the system provides for the compilation of information on levels of debt, which should at least reveal that arrears are accumulating or are not being eliminated. The debt information does not make the distinction between "genuine" and other arrears, however. A more important problem is that the debt information is not being compiled as advocated in the GFS Manual in many countries, possibly because the preparation of information on debt is not given special attention in the overall information requirements.

Another shortcoming in the measurement of arrears has to do with what the GFS Manual calls "floating debt" (Table C, item 17 and Table D, item 14). Floating debt is defined as payment orders issued for which checks have not been issued or paid. It therefore constitutes part of the stock of arrears. The GFS Manual recognizes that, in practice, it might not be possible to eliminate "float," or checks in transit, from the measure of floating debt, in which case it would not be a measure of genuine arrears. In any case, where the issue of payment orders is not a comprehensive measure of obligations incurred, floating debt falls short of a measure of all arrears.

Both the due-for-payment and accrual bases of recording capture information about levels of outstanding receipts and payments (in "accounts receivable" and "accounts payable") as an intrinsic part of the recording systems. They therefore provide measures of levels of arrears as a matter of course although, unlike the due-for-payment basis, the accrual basis does not, without special action, distinguish between amounts due for payment and amounts not yet due for payment. Measures of the net accumulation of arrears can be derived by deducting the opening level of arrears from the closing level. However, neither basis provides a measure of genuine arrears. This concept is difficult to measure in any recording system, and users will generally have to use other information, such as the length of time debt has been overdue, to arrive at an approximation of "genuine" arrears.

b. Transactions in kind

The present GFS Manual specifically excludes transactions in kind from the main part of the GFS system but does include some information about them in memorandum items. However, like all memorandum items, they are not recorded consistently. Transactions in kind are defined in the GFS Manual (Section II.A.7) as "flows of goods and services for which there are no flows of payment, either in cash or in fixed-term contractual obligations, in the opposite direction."

Flows of goods and services out of government with nothing in exchange ("payments in kind") represent the major part of government operations (i.e., the provision of nonmarket goods and services free of charge to the

community for household consumption). Measures of the costs of payments in kind are included (indistinguishably) in GFS information on expenditure and contribute to the calculation of the overall deficit.

Although the costs of payments in kind are recorded in the cash system, some of them warrant separate identification, including payments in kind in lieu of wages, transfers in kind to other levels of national government, and transfers in kind abroad, including to governments and international organizations, to supranational authorities, and to others abroad. The current system includes some of these payments in memorandum items.

"Receipts in kind" can include in-kind payment of taxes, gifts (e.g., of land, paintings, etc.) or, more commonly, grants in kind from foreign governments, other levels of national government, or international organizations. Receipts in kind are not included at all in the current system, other than in memorandum items, and these receipts are not taken into account in calculation of the overall deficit. Goods received and subsequently sold would, however, enter the system as sales at the time cash was received.

Grants in kind are included in the system only as memorandum items, as are transfers in kind from nongovernmental sources.

The GFS Manual specifically excludes barter transactions, noting that the costs of providing goods and services for the outflowing component of a barter transaction would be recorded in the statistics when cash payments were made to cover them. The value of the inflowing goods and services in exchange would not be recorded.

It is clear from the foregoing discussion that the present GFS Manual, while it provides some supplementary information on transactions in kind, does not include them as an integral part of the system as users appear to require. The due-for-payment basis, as defined in this paper, offers no better coverage of in-kind transactions than the cash system. The accrual basis includes transactions in kind as an integral component but does not identify these transactions separately as a matter of course. If separate information about them were required, it would have to be provided by separate identification of the transactions as items in classifications. The accrual basis does not remove the difficulties that can be associated with the valuation of receipts in kind.

3. Difficulty of linking GFS data to data from other macroeconomic systems

The fact that the current GFS system employs a cash basis of recording means that it is the only one of four major macroeconomic statistical systems with a cash recording basis. The 1993 SNA and the 1993 BPM both use an accrual basis of recording, and the Manual of Monetary and Financial Statistics, currently being written, will also employ an accrual basis. While the use of a cash basis of recording is not the only reason why there are difficulties in linking GFS data with data from these other systems, it

creates differences that pervade every element of comparison, and its effects cannot be isolated easily.

Both compilers and users of information from the various macroeconomic statistical systems have an interest in linking information from the systems. From the perspective of compilers, the existence of several systems using the same basic data sources to produce different information indicates duplication of compilation effort. It also discourages attempts by compilers to ensure that the information from which they produce their statistics is consistent between systems, even if the end products cannot be linked easily. While duplication may not necessarily occur within the same organization, it necessarily involves additional costs at the national level. Adoption in GFS of an accrual basis of recording would remove an important barrier to cooperation and coordination among countries' compilers of GFS, national accounts, and balance of payments statistics. Greater coordination would not only reduce compilation costs but would also improve the quality and consistency of information produced from the respective systems.

From the perspective of users, it is currently very difficult to make useful comparisons of GFS information with national accounting, balance of payments, and money and banking information. While all three of these other systems produce information about government operations to varying degrees, this information is not as detailed and informative as the full range of comparable GFS information. Users need to be able to relate detailed information from the GFS system to information produced from the other systems. The presence of similar but not easily related measures of government operations can be confusing to all but the most sophisticated users. Obviously, the various statistical systems serve different purposes, and therefore some differences in the concepts applied are unavoidable. However, the pervasive nature of the recording basis difference and the consequent difficulty in quantifying its effects suggest that it should be eliminated or reduced if at all possible.

V. Advantages of Moving to an Accrual Basis

1. More comprehensive information recorded at a more appropriate time

As will be evident from the discussion of the shortcomings of the cash recording basis, both the accrual and due-for-payment bases provide a wider range of information than the cash basis. The accrual basis in its fullest articulation includes full balance sheets at the beginning and end of the accounting period that are reconciled with economic flows recorded in the accounting period, including valuation changes. It records "internal" transactions, transactions with other units, and "other economic flows." It therefore is superior in these regards to both the cash and due-for-payment bases, which record only a limited range of stocks and do not record

"internal" transactions and "other economic flows." As well, the accrual system, as it is generally understood, encompasses the cash system insofar as it records cash flows and balances.

The accrual basis generally records economic activity at the time the activity occurs. As the 1993 SNA (paragraph 3.94(a)) notes, this makes it possible to "evaluate the profitability of productive activities correctly (i.e., without the disturbing influence of leads and lags in cash flows) and to calculate a sector's net worth correctly at any point in time."

Of course, in the case of government, it is not "profitability" that is measured but mainly the production and consumption of nonmarket goods and services. The timing advantage of the accrual basis nevertheless applies to the measurement of all government transactions. Users who have a specific need for information on the cash flows and balances associated with government activity need not be disadvantaged by a move to an accrual basis, because their needs can be met from cash information that is an integral part of such a system.

The comprehensive nature of accrual accounting underlies the advocacy of its adoption for government by national and international organizations responsible for the development of accounting standards. Accrual accounting has become, or is planned to become, the standard form for presenting government financial reports in a number of countries. Survey results confirming this trend are reported later in this paper. Although the purposes of general financial reporting and government finance statistics differ, there is some commonality, as occurs in "whole of government" financial reporting, which is being introduced in some countries. The rationale for preferring accrual to cash reports in accounting for "whole of government" therefore has some relevance to the case for adopting an accrual basis of recording in GFS. In essence, this rationale is that the monitoring of the "stewardship" of government finances requires measurement of change in all the government's resources, not just its cash resources. This implies accrual recording covering noncash as well as cash transactions and a full accounting for all of the government's assets and liabilities. Monitoring solvency requires that cash flows and balances be among the flows and stocks recorded. 1/

2. Resolution of problems arising from existing recording basis

As has already been indicated in Section IV, adoption of an accrual basis of recording for GFS would address, in varying degrees, deficiencies perceived by users in the way the current system deals with particular issues of concern. With regard to arrears, it is evident that an accrual

1/ The rationale for the adoption of accrual accounting in government is given more fully in the following references: Commonwealth Department of Finance (1992); OECD (1993); Pallot (1992); Parliament of the Commonwealth of Australia (November 1995); Shand (1987); and Warren (1993).

basis would provide more useful information than the existing basis, as would a due-for-payment basis, but would require some additional classifications to provide all of the information apparently required. By definition, the accrual basis covers transactions in kind whereas the cash and due-for-payment bases do not. Nevertheless, considerable specification and additional classification of transactions would be necessary to ensure that the accrual basis provides the information relating to transactions in kind that users need.

3. Closer linkage with other macroeconomic statistical systems

It is obvious that the movement of the GFS system to an accrual basis would establish closer links between the GFS system and the macroeconomic statistical systems that are on an accrual basis, principally the 1993 SNA, the 1993 BPM and the yet to be completed Manual of Monetary and Financial Statistics. Of course there are many other aspects of closer harmonization of the GFS system that have to be considered. Nevertheless, given the pervasive nature of the recording basis in statistical systems, without adoption of an accrual basis in the GFS system, linkages between GFS and the other systems could only ever be approximate.

VI. User Preferences

1. Comments on "issues note"

An "issues note," which included a statement on the issue of the recording basis to be adopted in the GFS system, was sent for comment to Fund departments, international organizations, and GFS correspondents. A brief summary of the comments received in relation to the recording basis is given below.

Commentators generally did not express strong preferences for either a cash or an accrual recording basis, recognizing the weaknesses of the cash system but also recognizing that few countries are in a position to record fully on an accrual basis. One commentator said that examination of moving to an accrual basis was useful in principle but was concerned that such a change would be overly ambitious and might overload governments. Most suggested that both bases are required, some giving emphasis to an accrual approach with cash as a fallback, and others favoring cash with supplementary information on an accrual basis. Arrears and interest on government securities were cited as examples of supplementary information required on an accrual basis. The due-for-payment basis was mentioned by three commentators as a possible fallback from full accrual.

Several commentators mentioned that cash flows can be derived from an accrual system, particularly if measures of arrears are available. One commentator considered accrual data "indispensable" where cash and accrual data diverge. Another noted that analysts often "bridge the gap" between

cash and accrual information where arrears are important, by including their own measures of arrears.

Consistency with the 1993 SNA was cited by a number of commentators as an advantage of adopting an accrual basis. Other commentators noted the trend towards adoption of accrual accounting in some countries but expressed the view that it would take some time for this trend to become widespread. It was suggested by one commentator that the New Zealand experience in adopting accrual accounting and budgeting for "whole of government" should be cited in support of a move to an accrual basis. This commentator also considered that the accrual basis served fiscal management into the medium term better than other systems. It would stop "tricks" used in cash systems to obscure the underlying budget position. It was also favored because it incorporates balance sheets and listings of contingent items. 1/

Advantages of the cash basis cited were that it is used by most governments, it provides a measure of the government's impact on liquidity, and it is available directly from governments' accounts. Three commentators saw cash information providing a linkage between the fiscal and monetary accounts, 2/ but one noted that the information available from the current GFS system is not strictly on a cash basis (in terms of cash flows into the financial system) and is therefore not an ideal measure of fiscal impact on the rest of the economy.

One commentator suggested investigation of the magnitude of differences that accrual recording would introduce to statistics. If the differences were small, it was suggested that the cash data could be considered consistent with the 1993 SNA.

2. Survey of users in member countries

Compilers of GFS information for the Fund in 170 member countries were sent questionnaires asking them, among other things, to obtain users' views and preferences regarding elements of the GFS system. Responses were received from 59 countries, covering 72 users. Response rates were higher (68 percent) for industrialized countries than for other countries (29 percent). Although users were not asked directly whether they preferred the system to be on a cash, due-for-payment, or accrual recording basis, they were asked whether they required certain types of information, some of which would be available only if the GFS system were to move to an accrual basis of recording. The first of these questions sought users' preferences for various deficit concepts, including an accrual deficit. The numbers

1/ In fact the accrual basis in its purest form specifically excludes "contingent items" from the basic financial reports. However, the relevant accounting standards recommend that these items be reported as "notes to the accounts."

2/ This comment possibly reflects an erroneous view that monetary statistics are recorded on a cash basis.

and percentages of users indicating a requirement for a cash, accrual, and due-for-payment deficit are given in Table 1.

Table 1. Number and Percentage* of Users Preferring Various Deficit Concepts

No. of Users X Country Type	Cash Deficit		Due-for-Payment Deficit		Accrual Deficit	
	<u>no.</u>	<u>percent</u>	<u>no.</u>	<u>percent</u>	<u>no.</u>	<u>percent</u>
<u>Industrial Countries</u>	19	86	3	14	16	73
<u>Developing Countries:</u>						
Africa	11	85	4	31	6	46
Asia	13	100	1	8	4	31
Europe	8	80	3	30	2	20
Middle East	2	67	1	33	-	-
Western Hemisphere	10	91	3	27	6	55
Total All Types	63	87	15	21	34	47

* Percentage of number of users who submitted a completed questionnaire. Users were permitted to indicate a need for more than one type of deficit concept. Not all of the concepts that were listed are included above.

While the table indicates clearly that the deficit concept required by the largest number of users (63, or 87 percent) was the cash deficit, a significant number indicated a requirement for an accrual deficit (34, or 47 percent) and/or a due-for-payment deficit (15, or 21 percent). Given that 72 users answered the questionnaire, it is clear that a significant number of users reported that they required a combination of an accrual deficit and/or due-for-payment deficit and a cash deficit. It is evident that the accrual deficit is required more by users in industrial countries than in developing countries.

Information on the number and percentage of users requiring various types of balance sheet information is given in Table 2 below:

Table 2. Number and Percentage* of Users Requiring Various Types of Balance Sheet Information

No. of Users X Country Type	Full Balance Sheets		Net Worth		Gross Debt		Fixed Assets		Financial Balance	
	no.	percent	no.	percent	no.	percent	no.	percent	no.	percent
<u>Industrial Countries</u>	10	45	11	50	15	68	9	41	16	73
<u>Developing Countries:</u>										
Africa	10	77	5	38	7	54	4	31	4	31
Asia	7	54	2	15	2	15	4	31	7	54
Europe	4	40	1	10	3	30	1	10	3	30
Middle East	1	33	1	33	-	-	-	-	1	33
Western Hemisphere	6	54	4	36	5	45	4	36	3	27
Total All Types	38	53	24	33	32	44	22	31	31	43

* Percentage of number of users who submitted a completed questionnaire. Users were permitted to indicate a need for more than one type of balance sheet item. Not all the items that were listed are included above.

More than half the users (53 percent) responding to the survey indicated a requirement for full balance sheets. With regard to the various components of balance sheets listed in the questionnaire, the percentage of users requiring a measure of net worth (33 percent) was less than the percentage requiring full balance sheets and the percentages requiring measures of gross debt (44 percent) and the financial balance (liabilities less financial assets) (43 percent). The categories in the questionnaire were not mutually exclusive, which suggests that users indicating a need for full balance sheets as well as for the various components of full balance sheets were indicating that information on gross debt and/or the financial balance would be the next best thing if full balance sheets were not available. There were no clear differences between industrial and developing countries in the requirement for full balance sheets, although there were differences between them in their requirement for some of the other concepts.

Users' responses to questions regarding the degree of harmonization they required between the 1993 SNA and GFS are given in table 3 below. "Full" or "much more" harmonization would require a change to an accrual basis of recording.

Table 3. Number and Percentage* of Users With Various Preferences Regarding Degree of Harmonization Between GFS and 1993 SNA

No of Users X Country Type	Full Harmonization		Much More Harmonization		A Little More Harmonization		Same or Less Harmonization		Not Stated	
	no.	percent	no.	percent	no.	percent	no.	percent	no.	percent
<u>Industrial Countries</u>	4	18	8	36	5	23	1	5	4	18
<u>Developing Countries:</u>										
Africa	5	38	1	8	1	8	1	8	5	38
Asia	4	31	4	31	1	8	1	8	3	23
Europe	2	20	1	10	1	10	1	10	5	50
Middle East	1	33	1	33	-	-	-	-	1	33
Western Hemisphere	3	27	4	36	2	18	-	-	2	18
Total All Types	19	26	19	26	10	14	4	4	20	28

* Percentage of number of users who submitted a completed questionnaire.

The information in this table indicates that a majority (52 percent) of users want full or much more harmonization of the GFS system with the 1993 SNA than exists in the current system. Omitting the "not stated" category, 38 out of 52, or 73 percent of the users answering this question, want full or much more harmonization. This percentage was higher for developing countries (76 percent) than industrial countries (66 percent).

3. Conclusions regarding user preferences

While users who were contacted generally appreciated the advantages of an accrual system, they also clearly wished to see elements of the cash system retained, in particular the cash deficit. Some users were concerned that accrual data are not available from many government accounting systems, while others questioned whether there would be significant differences between data recorded on cash and accrual bases. A small number of users

between data recorded on cash and accrual bases. A small number of users saw merit in a due-for-payment system, mainly as a fallback in case the introduction of an accrual system did not prove feasible. A majority of users wanted either full, or a much higher degree of harmonization of the GFS system with the 1993 SNA, which suggests that they accept the implication that the system would have to move to an accrual basis of recording to achieve this degree of harmonization.

Leaving aside issues of availability of data, it can be concluded that most users see a need for both cash and accrual information. From a purely conceptual viewpoint, a high proportion of users, such as those seeing a need for a high degree of harmonization with the 1993 SNA, would probably prefer an accrual system with supplementary cash information ahead of a cash system with supplementary accrual information. However, when practical issues are introduced, some users would probably argue that a cash system with supplementary accrual information should be preferred, at least until accrual information is more generally available. The question raised by some users on whether differences between cash and accrual information are significant also becomes relevant in this context. If the differences are generally small, or if important differences are limited to a few items, perhaps cash data could be used as a proxy for most accrual data, and the move to an accrual basis could be made sooner than might otherwise be contemplated.

VII. Data Availability

1. Survey results: current situation

The question on whether the GFS system can move to an accrual basis, either soon or in the more distant future, depends on whether countries are able to compile information on that basis. The questionnaire sent to 170 country compilers of GFS information for the Fund was designed to elicit information on the availability of administrative records, from which countries could compile information on various recording bases, both now and in the medium term. The following tables provide tallies of the responses made by the 59 compilers that returned a completed questionnaire.

Table 4 ahead shows the number of responses from countries indicating, for each type of unit (budgetary, extrabudgetary, social security fund) at each level of government, that administrative records are currently available to compile data on the main recording bases shown. It also shows the percentage that the responses for each recording basis represent of the total number of responses for all recording bases combined in each category. As each country could indicate more than one recording basis for each level of government, the number of responses has been preferred in this table over the number of countries as the counting unit. This also enables totals for each level of government and for all levels combined to be calculated without duplication.

Table 4. Number of and Percentage* of Responses Indicating that Information on Each Basis of Recording is Available: Current Situation

Subsector	Due-for-Payment Basis		Accrual Basis		Other Noncash		Cash Basis Only	
	no.	percent	no.	percent	no.	percent	no.	percent
<u>Central Government</u>								
Budgetary	6	6	16	23	4	6	45	63
Extrabudgetary	2	3	22	34	2	3	38	59
Social security schemes	4	7	18	33	3	5	30	55
Total Central Government	12	6	56	29	9	5	113	59
<u>State Government</u>								
Budgetary	2	8	5	21	2	8	15	62
Extrabudgetary	1	6	7	44	-	-	8	50
Social security schemes	-	-	5	38	2	15	6	46
Total State Government	3	6	17	32	4	8	29	55
<u>Local Government</u>								
Budgetary	2	4	15	27	5	9	33	60
Extrabudgetary	2	8	8	33	1	4	13	54
Social security schemes	2	14	2	14	1	7	9	64
Total Local Government	6	6	25	27	7	8	55	59
Total All Levels	21	6	98	29	20	6	197	59

* Percentage of responses to the question within each level of government. Countries could report more than one recording basis in each category.

The table shows that responses indicating current availability of administrative records on a cash basis totaled 197, or 59 percent of all responses, compared with 98 responses (29 percent) indicating availability of records on an accrual basis and 41 responses (12 percent) indicating information available on a due-for-payment or some other basis. These percentages varied only slightly between the different types of units (i.e., budgetary, extrabudgetary, and social security schemes) and between the different levels of government. Separate data, not reproduced here, indicated that the percentage of responses reporting availability of information on an accrual basis was higher in industrial countries (38 percent) and in Western Hemisphere countries (34 percent) than in other countries (18 percent).

2. Survey results: medium-term situation

Countries were also asked to predict the availability of records in the medium term. Table 5 compares the percentage of countries reporting that records are currently available on each recording basis with the percentage

of countries reporting that records would be available on each recording basis in the medium term. Because these data relate to countries rather than to responses, they cannot be aggregated to give totals for all types of units and levels of government combined. The number of countries that answered in relation to the medium term was often significantly fewer than the number that answered in relation to the current period. This gave rise to the possibility of bias owing to countries not answering the question because they expected no change in the medium term. For this reason, percentages for the medium term were also calculated after including the nonresponding countries with the same recording basis as they reported for the current period. These percentages are shown in parentheses in the table.

Table 5. Percentage* of Countries Reporting Information Available on Each Basis of Recording: Current and Medium-Term Scenario

Subsector	Due-for-Payment Basis		Accrual Basis		Other Noncash		Cash Basis Only	
	Current percent	Medium Term percent	Current percent	Medium Term percent	Current percent	Medium Term percent	Current percent	Medium Term percent
<u>Central Government</u> Budgetary	10	7 (10)	28	36 (40)	7	7 (5)	78	66 (65)
Extrabudgetary	4	3 (4)	42	48 (53)	4	4 (4)	72	59 (62)
Social security schemes	8	3 (6)	37	45 (48)	6	9 (8)	62	64 (60)
<u>State Government</u> Budgetary	9	13 (14)	23	40 (45)	9	7 (5)	68	47 (45)
Extrabudgetary	6	- (6)	44	70 (62)	-	- (-)	50	30 (31)
Social security schemes	-	- (-)	50	50 (60)	20	25 (10)	60	75 (60)
<u>Local Government</u> Budgetary	4	6 (4)	30	44 (40)	10	9 (10)	66	56 (62)
Extrabudgetary	8	5 (8)	33	37 (42)	4	5 (4)	54	53 (48)
Social security schemes	14	18 (14)	14	14 (18)	7	8 (8)	64	67 (71)

* Percentage of all countries for which an answer to the question was recorded. Countries could report more than one recording basis.

This table indicates an expected increase in the percentage of countries having access to accrual information for most types of units at each level of government. For most types of unit/levels of government combinations, there also was expected to be a small decrease in the availability of records on a cash recording basis.

3. Conclusions on data availability

The survey results indicate that while the cash basis of recording is the predominant basis among government units in most responding countries, accrual information is available in a significant number of these countries (the crude average across type of unit/level of government categories was 33 percent ^{1/} of countries) and the number of countries with access to accrual information is expected to increase (the average just quoted is expected to rise to 43 percent). This indicates a modest trend toward more extensive use of accrual accounting in government, confirming that the previously noted adoption of accrual accounting by governments is expected to continue.

It needs to be borne in mind that these results refer to all types of units and levels of government and that no weight is given to the relative importance of different types of units. In this regard it is worth noting that 28 percent of countries reported that they had access to administrative records for central government budgetary units (which would all be large or important units) on an accrual basis and 36 percent said they expected to have access in the medium term. It also needs to be borne in mind that a high proportion of countries indicating that they had access to accrual data also indicated that they had access to cash data. The survey results do not indicate which type of information predominated among units at the same level of government, nor whether dual systems operated within units. Because cash information is an integral part of an accrual system, countries with predominantly accrual systems might have also reported availability of cash information.

VIII. Quantitative Difference Between Data Recorded on Cash and Accrual Bases

1. Country practice in adjusting cash data to accrual in national accounts statistics

With government accounts around the world mainly based on a cash basis of recording, the question arises as to whether national accountants are making timing adjustments to cash-based accounting data for the general government sector to bring them to an accruals basis in order to comply with the recommendations of the 1993 SNA. The question is relevant whether or not countries have moved from the 1968 to the 1993 SNA, since an accrual basis of recording for general government applies in both editions of the SNA.

^{1/} Given the disparity in the extent to which accrual information is available between industrialized and Western Hemisphere countries, on the one hand, and other countries, on the other, and given the higher response to the survey by industrialized countries, the percentage of countries with access to accrual information could be lower than indicated by the survey.

The answer to this question is of interest in the revision of the GFS Manual insofar as it might indicate that timing differences between the cash and accrual basis of recording are not so great as to cause national accounts compilers to adjust for them. If this were the case, it might imply that timing differences could be ignored or given less emphasis in the choice between these two recording bases for the revised GFS Manual.

To find an answer to the question, a letter was sent to national statistical agencies in 20 countries that were considered likely to have well-developed national accounting procedures. Replies were received from 13 of the countries. In general, the countries receive both cash and accrual data for compiling national accounts statistics for the general government sector, although cash appeared to predominate in most of the countries. One country (Finland) received mainly accrual data, and three countries (Australia, United Kingdom, Canada) indicated that they expect to receive more accrual data in the future. Accrual data were typically available for certain types of transactions (e.g., construction work), for isolated extrabudgetary units, or for specific classes of unit (e.g., social security funds, local government). One country (Austria) received data for all units outside the federal government (i.e., state governments, local government, social security funds) on a due-for-payment basis.

Nearly all countries reported making some timing adjustment of cash data to an accrual or due-for-payment (Austria only) basis, although in most cases wide-scale adjustment was not practiced. The items that were adjusted varied from country to country, the most common being tax receipts of various kinds, grants and subsidies, and some capital expenditures. In the case of subsidies and transfers to public corporations, instead of adjusting cash data, countries sometimes used accrual data of the corporations in lieu of the government cash data.

Only four countries (Australia, Netherlands, Canada, and Austria) provided the information requested on the size of the adjustments made. They reported adjustments ranging from less than 1 percent to 13 percent of the unadjusted value of the items.

It is not possible to draw firm conclusions from this exercise in relation to the question of quantitative importance of timing differences between cash and accrual data. It is clear that the differences for particular items cause national accounts compilers sufficient concern to make them adjust their estimates for those items. This suggests that the differences cannot be ignored. On the other hand, routine comprehensive adjustment is not practiced, suggesting that "adjustment where it matters" is the practice followed.

2. Differences in New Zealand data

To gain further insights into the differences between information presented on a cash and on an accrual basis of recording, information recorded on each basis in the financial accounts of the government of New Zealand was compared. These comparisons are summarized in Table 6 below.

Table 6. New Zealand Combined Crown Entity: Comparison of Operating Cash Flows and Accrued Operating Transactions*

	Year ended June 30 (in millions of New Zealand dollars)								
	1992			1993			1994		
	Cash	Accrual	Difference percent	Cash	Accrual	Difference percent	Cash	Accrual	Difference percent
Revenue/receipts									
Direct taxes	15508	15371	0.8	16186	16591	-2.5	17987	17565	2.2
Indirect taxes	8663	8530	1.5	9124	9372	-2.7	9739	10310	-5.9
Other receipts	3405	3445	-1.2	2902	3911	-34.7	2366	2288	-3.3
Total revenue/receipts	27576	27346	0.8	28212	29674	-6.2	30092	30183	-0.3
Expenses/payments									
Operating expenses and transfers	25450	26316	-3.4	26486	27211	-2.7	25390	21953	13.5
Finance costs	4147	4415	-6.5	4348	3961	8.9	3443	3788	-10.0
Net foreign exchange losses	-	1764	-	-	296	-	-	898	-
Total expenses/payments	29597	32495	-9.8	30634	31468	-2.1	28833	28639	7.6

* From "Financial Statements of the Government of New Zealand" for the years ended June 30, 1992, 1993, and 1994.

The comparison indicates differences ranging from -0.3 percent (for total revenue/receipts in 1993/94) to -34.7 percent (for other receipts in 1992/93). It should be noted that the comparison reflects more than timing differences in that the accrual data include internal transactions and other economic flows that are not recorded in the cash data. For example, as the table shows, the item "net foreign exchange losses" is not recorded in the cash information. Another example is depreciation, which is included with the accrual information for the item "operating expenses and transfers" but is not included in the cash information. Numerous capital gains and losses are also included in the accrual data. The effects of these noncash

transactions can be removed from the comparisons at a broad level by using a different measure of the accrual information. This measure of the accrual data, excluding noncash transactions, is derived by adding changes in receivables to cash receipts data and changes in payables to cash payments data. Comparing this measure with the cash data gives timing differences between cash and accrual data for total operating revenue of 2.0 percent in 1991/92, 0.3 percent in 1992/93, and -1.0 percent in 1993/94, and for total operating expenses of 2.3 percent in 1991/92, 1.3 percent in 1992/93, and -2.4 percent in 1993/94.

3. Conclusions on differences between data recorded on cash and accrual bases

The foregoing analyses are obviously limited in scope and not necessarily representative of conditions in countries generally. Nevertheless, they indicate that, in the countries concerned, timing differences between cash and accrual data are sometimes sizable, sufficiently so to force national accounts compilers to adjust for them in certain cases. The New Zealand data indicate that the noncash information included in accrual data can create greater differences between cash and accrual data than timing differences can. Because it is only the timing differences that are relevant in this context (the noncash items would be defined and measured separately), only the New Zealand data that were modified to exclude noncash data need to be considered. These support the view that timing differences are generally not large.

IX. Possible Approach to Defining the Recording Basis in GFS

1. Range of options

The range of options for the basis of recording to be adopted in the revised GFS Manual theoretically extends from "no change," implying retention of the current modified cash basis, to adoption of "full accrual," including fully reconciled opening and closing balance sheets, transactions, and other economic flows, presented on an accrual basis. ^{1/} Given that most users who favor an accrual basis appear to also want supplementary cash information, the accrual option needs to be defined as including supplementary cash elements, for example, a cash flow statement and a measure of opening and closing cash balances.

^{1/} A guide to the type and range of information that might be included in the "full accrual" basis is given by the information contained in the full range of accounts (i.e., production, distribution and use of income and accumulation accounts, and the balance sheets) in the central framework in the 1993 SNA. While some of the information included in those accounts would not be appropriate in the GFS system, the basic economic flows and balances cover similar economic events, although they are presented in different accounting formats.

Given user dissatisfaction with the current system, clearly the option of "no change" is unacceptable. Some change to address the deficiencies in the current system is essential. As a minimum, this could be simply a set of measures to ensure that countries apply elements of the current system that they do not currently apply. However, from the discussion earlier on how the current system fails to deal adequately with arrears and transactions in kind, it is clear that changes to procedures will not be enough to remove these deficiencies completely.

At the other extreme, the option of "full accrual" as defined above appears to address all of the deficiencies of the current system, albeit with a need to develop special procedures and classifications in some cases. Indeed, it goes well beyond removing the deficiencies by introducing full balance sheets and integration of stocks and flows data. It also has the decided advantage of allowing closer harmonization with other macroeconomic statistical systems, in particular the 1993 SNA. However, it has the clear disadvantage that, at present, only a small number of countries currently have the administrative records necessary to record all elements of a "full accrual" basis.

Many other options could be devised that lie between these extremes. Some commentators have suggested further modifications to the cash basis of recording to deal with the deficiencies of the current system. At the very least, such a system would have to incorporate transactions in kind and sufficient balance sheet information to enable the identification of arrears. Consideration would also have to be given to separate identification of transactions related to assets sales and the recording of noncash transactions such as depreciation. Such a system would be hybrid and difficult to make internally consistent. It would have the major drawback that the information it produced could not be related easily to information in national accounts, balance of payments, and monetary and financial statistics.

A due-for-payment system has been suggested as a possible "fallback" from an accrual system. Such a system would differ from an accrual system in its accounting for transactions only insofar as it would not record accruing revenues and expenditures that were not due-for-payment, for example, interest accruing on zero coupon bonds. Due-for-payment data would therefore be an adequate substitute for accrual data for most transactions. Due-for-payment data would meet most of the requirements for measuring arrears but, unless modified to do so, would not account for transactions in kind and would also have to be modified to provide adequate information on assets sales and cover noncash transactions such as depreciation. In addition, the results of the survey of compilers indicate that fewer countries have access to information on a due-for-payment basis than have access to accrual information, which suggests that there are no advantages from a practical viewpoint in adopting a due-for-payment basis ahead of an accrual basis.

While the administrative records necessary to record on a full accrual basis are not currently available in the majority of countries, the results of the survey of GFS compilers, described earlier, suggest that more countries are moving to introduce elements of accrual accounting in their administrative systems. The fact that the 1993 SNA adopts an accrual basis of recording for all sectors, with no dispensations for the general government sector, indicates an expectation that accrual information will become available, or that cash data, adjusted to an approximate accrual basis "where it matters," are an acceptable substitute. Information presented in this paper about countries' national accounting practices supports this view. A general approach of this type, adopting an accrual basis in principle but accepting approximations to that basis, could be adopted for GFS. In fact, the current GFS Manual employs such an approach in relation to the cash basis of recording insofar as it allows recording of transactions at stages that are approximations to the cash basis.

Of course, very few countries are in a position to implement all elements of the 1993 SNA immediately, and presentation of the full range of information for which the 1993 SNA provides is seen by most countries as a target for the future rather than as an immediate goal. Clearly, if the range of information defined as "full accrual" were to be recommended for GFS, a similar view with respect to countries' compliance with the GFS Manual's recommendations would have to be taken. Compilation of the full range of accrual information in the "full accrual" basis would have to be recommended as a longer term requirement with which only a few countries would be in a position to comply at the outset. This suggests that a "basic" set of accrual, or approximate accrual, information would also need to be specified, which represented the set of information countries would be encouraged to compile from the time of introduction of the revised GFS Manual.

2. A possible strategy

The foregoing discussion indicates fairly clearly that an accrual basis of recording in the revised GFS Manual would have major advantages from a conceptual viewpoint over the present modified cash basis. Apart from the fact that accrual is the basis used in the national accounts statistics and other macroeconomic systems, accrual recording provides, with minimal modification, a basis for overcoming deficiencies in the current system, such as the failure to deal adequately with arrears and transactions in kind. Furthermore, in its fullest form, it offers users of the statistics a wider range of information than the cash basis provides, and it records transactions at a more appropriate time, namely, the time at which economic activity occurs rather than when money is exchanged. As well, the accrual basis fulfills requirements for cash information in that it records cash flows and balances. There are also clear advantages in adopting a recording basis that can be applied consistently throughout the system and that provides for internal balancing of stocks and flows.

This suggests that the ultimate goal in the revision of the GFS Manual should be the adoption of the "full accrual" basis of recording, as

described in this paper. A strategy is needed that provides a path to this goal, taking account of the fact that most countries do not have access to government administrative records that are maintained on an accrual basis and that many of those that do are not yet in a position to compile all the information implied by the "full accrual" basis.

Advantage can be taken of the fact that quantitative timing differences between data recorded on a cash and an accrual basis are small for the majority of transactions. This suggests that cash data can serve as a proxy for accrual data for such items and that only a small number of items would have to be adjusted to provide reliable estimates of accrual data from records maintained on a cash basis.

Account also needs to be taken of the fact that the availability of data recorded on an accrual basis is expected to increase. The GFS Manual should anticipate and encourage this development. It should avoid the possibility of advocating a recording basis that may not be consistent with the record keeping practices of the majority of countries at some point in its lifetime.

An approach is therefore suggested that adopts accrual as the recording basis from the outset and provides guidelines as to how compilers might approximate this basis where their country does not yet have access to administrative records that are maintained on an accrual basis. Such an approach would be similar to the approach adopted in the current manual, whereby guidelines are provided to enable approximation of the cash basis where it is not the basis found in administrative records. This approach would have most of the advantages of an accrual system described previously and would recognize, and possibly encourage, the progressive adoption of accrual accounting among governments that the survey results suggest is taking place.

Given that few countries would be in a position from the outset to provide all of the information implied by a "full accrual" system, and if it is assumed that the life of the revised manual will be at least ten years, a strategy is indicated that allows time for countries to move progressively from compiling a defined subset of the "full accrual" set of data to compiling most or all of the statistics comprising the "full accrual" basis in the medium term. This suggests the definition of a "migration path" through which countries would be encouraged to progress towards compiling the full range of information defined as the "full accrual" basis. The stages along the path would be defined in terms of the data to be compiled. The definition of the stages would balance the priorities of users and the availability of information from administrative records. At any given point, countries would be at different stages along the "migration path," depending on the stage of development of their administrative systems. They would, nevertheless, be encouraged to move as quickly as possible through the various stages. Clearly, the first stage in the path would need to be defined to address the most urgent user concerns regarding deficiencies of the current system.

Adoption of such a strategy would also be consistent with the approach adopted in the 1993 SNA and the related macroeconomic statistical systems. Apart from treating the accrual basis as the conceptually superior recording basis, these systems assume that it is the recording basis used by most institutional units and, where it is not, that appropriate adjustments can be made to basic data to convert them to an accrual basis. ^{1/} If the accrual basis is adopted for GFS, national accounts compilers and GFS compilers in countries where accrual information is not yet available from government will face similar tasks of adjusting data to an accrual basis. They should thereby be encouraged to cooperate in the preparation of the data. Such cooperation would improve the consistency and hence the usefulness of information produced from the national accounts statistics and GFS systems.

In summary, the suggested strategy would adopt accrual as the defined basis of recording in GFS. The range of accrual information included in the system would cover the same range of economic stocks and flows as covered in the 1993 SNA (without necessarily employing the same items and format of the SNA) and would include supplementary information on cash balances and flows. The system would balance the stocks and flows in the same manner as the 1993 SNA. A subset of this "full accrual" set of data would be defined that countries would be encouraged to compile from the inception of the revised GFS Manual. This initial data set would be defined to enhance the data produced from the existing system sufficiently to address its major deficiencies while also representing a data set that most countries could be in a position to compile soon after release of the manual. Countries would be expected to record transactions on an accrual basis, or to use existing data as a proxy for accrual data, and to adjust data from administrative records to an accrual basis when those adjustments would affect the final statistics significantly. Countries would be encouraged to move progressively along a defined "migration path" towards compiling the full range of information defined in the system.

^{1/} The 1993 SNA says in paragraph 3.96 that "accrual accounting arises naturally to the institutional units involved." It also says that "some transactors, in particular government units, do not keep records of purchases on an accrual basis." In such cases "efforts should be undertaken to correct basic statistics for major deviations and flaws."

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