

Fiscal Management of Scaled-Up Aid



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and Duncan Last



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Bhanganoma rural district, Swaziland: An after-school meal
is served to vulnerable children.

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Abbreviations

CPAR	Country Procurement Assessment Report
CPIA	Country Policy and Institutional Assessment
DAC	Development Assistance Committee
DEA	Data Envelopment Analysis
DfID	Department for International Development (U.K.)
DSA	Debt Sustainability Analysis
G-8	Group of Eight
GDDS	General Data Dissemination System
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
HIPC	Heavily Indebted Poor Countries
ICPR	International Development Agency Country Performance Rating
MDG	Millennium Development Goal
MTBF	Medium-term budget framework
MTDS	Medium-Term Debt Strategy
MTEF	Medium-term expenditure framework
MTF	Medium-term framework
MTFF	Medium-term fiscal framework
NDP	National Development Plan
ODA	Official development assistance
OECD	Organization for Economic Cooperation and Development
PEFA	Public Expenditure and Financial Accountability
PETS	Public Expenditure Tracking Surveys
PFM	Public financial management
PPP	Purchasing power parity
PRGF	Poverty Reduction and Growth Facility
PRSP	Poverty Reduction Strategy Paper
ROSC	Report on the Observance of Standards and Codes
VAT	Value-added tax
WAEMU	West African Economic and Monetary Union
<i>WEO</i>	<i>World Economic Outlook</i>
WHO	World Health Organization

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Preface

There is a renewed commitment by the international community to increase aid significantly to help low-income countries meet the Millennium Development Goals (MDGs). The Monterrey Consensus of 2002 called for increased and more effective aid for low-income countries. This was followed up by the commitment of the Group of Eight (G-8) countries at the Gleneagles Summit in 2005 to double aid to sub-Saharan Africa by 2010. There has also been a substantial increase in aid to low-income countries from other “emerging donors” as well as from nonofficial sources.

Prospects of scaled-up aid present low-income countries with both opportunities and challenges. More aid provides additional “fiscal space,” thereby offering these countries a unique opportunity to increase spending to accelerate progress toward the MDGs. Yet managing additional aid resources also poses significant challenges for macroeconomic management, including from the uncertainty and volatility surrounding aid disbursements and the impact of scaled-up aid on macroeconomic stability and debt sustainability.

The IMF aims to help countries fully spend and absorb all aid, provided that macroeconomic stability is not compromised and that the aid can be used effectively. Fiscal policy, in combination with monetary and exchange rate policy, is critical in determining how much of the aid is spent and absorbed. Low-income countries also need assistance in putting in place the economic and fiscal institutions that will permit them to absorb the scaled-up aid in a sustainable manner.

This paper discusses the role of fiscal policy in managing scaled-up aid. Accelerating progress toward the MDGs will require both more spending and more efficient spending in order to generate the desired social and economic outcomes. Scaled-up aid relaxes the budget constraint in aid recipient countries but does not eliminate it. Thus governments must choose a time path for revenue and expenditure policies that maximizes society’s welfare, subject to the constraint that spending cannot exceed available resources. A first step in this direction is to determine the overall resource envelope over the medium term. A given resource envelope, however, is consistent with an array of alternative medium-term spending paths. Therefore, choosing an appropriate medium-term spending path that is consistent with capacity constraints, macroeconomic stability, and fiscal sustainability is a critical issue in managing scaled-up aid flows. At the same time, more spending will only translate into progress toward the MDGs and other desired outcomes if spending is done efficiently. Much of this relates to strengthening planning, prioritization, and implementation on the basis of better institutions, in particular, public financial management systems. Another issue of particular importance in the context of scaled-up aid is how to deal with aid volatility and uncertainty. This paper attempts to provide operational guidance in addressing these issues.

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1

Introduction

The international community has committed to scaling up aid and improving aid delivery to low-income countries to help them meet the Millennium Development Goals (MDGs). The March 2002 Monterrey Consensus called on donors and international financial institutions to provide additional financing, improve aid predictability, and ensure that aid is aligned with national priorities. Recipient countries, on the other hand, have committed to implementing appropriate policies, strengthening institutions, and enhancing governance to ensure that aid is used effectively. At the 2005 Gleneagles Summit, the Group of Eight (G-8) countries committed to significantly increasing the amount of development assistance they provide to the low-income countries over the next decade. Specifically, donors committed to double aid to sub-Saharan Africa by 2010 (G-8, 2005).

Although official development assistance (ODA) to sub-Saharan Africa, net of debt relief, remained broadly unchanged in 2005, some countries are receiving rising private and public flows. Preliminary data suggest that total ODA declined slightly in 2006.¹ On the other hand, a wide range of other “emerging” donors are increasing their assistance to low-income countries. In many countries, the health sector is progressively receiving more assistance from the private sector, as well as from health funds.² Debt relief provided under the Multilateral Debt Relief Initiative and the Enhanced Heavily Indebted Poor Countries (HIPC) Initiative has created space for new borrowing by low-income countries, and some countries (for example, Ghana and Kenya) are using this opportunity to tap international capital markets. Remittances to low-income countries increased by more than 80 percent between 2000 and 2005, totaling twice the amount of ODA in 2005.³ Moreover, many countries are benefiting from high commodity prices. Thus, resource flows to many low-income countries are increasing, enabling them to scale up spending.

¹World Bank (2007c). Throughout this paper, the term “aid” includes project aid and program aid, as well as extrabudgetary aid.

²The overall aid from private sources doubled during 2001–05 to US\$14.7 billion (World Bank, 2007c). The Bill and Melinda Gates Foundation has provided more than US\$6 billion for health programs. Global funds to combat HIV/AIDS were estimated to reach US\$9 billion in 2007 (Serieux and McKinley, 2007).

³For a discussion of the contribution of remittances to poverty reduction in Africa, see Gupta, Patillo, and Wagh (2007).

Effective and sustainable use of these flows—both public and private—requires sound fiscal management. In an environment of scaled-up resource flows, countries need to frame their spending programs with a medium-term perspective in mind. In addition, they need to ensure that resources are used efficiently, both by ensuring alignment of budget priorities and those of donors and by strengthening critical fiscal institutions. The IMF’s Medium-Term Strategy calls on the IMF to assist low-income countries in establishing policies and economic institutions that help them “absorb the projected scaling up of aid in a sustainable way” (IMF, 2005b). This paper addresses four questions that shape fiscal policy response to scaled-up aid:⁴

- How should the *medium-term resource envelope* for the budget be assessed? Formulating spending plans in a medium-term perspective requires information about the availability, phasing, and magnitude of resource flows over the medium term. In many countries, comprehensive information on current resource flows is not available, making this particularly difficult. The task is further complicated by an increase in the number of donors—both official and private.
- What considerations should influence the choice of a *medium-term spending path* for the budget? Once the resource envelope is established, countries need to decide how much and how fast available resources should be spent over the medium term. Factors influencing this decision include macroeconomic conditions, capacity constraints (both absorptive and institutional), and debt sustainability considerations.
- How should the budget deal with *aid uncertainty and volatility*? Aid volatility and uncertainty have often complicated policy implementation, especially in countries where a large part of government spending is financed by aid (see Bulíř and Hamann, 2006). These issues are likely to become even more relevant when external flows are scaled up.
- Which *fiscal institutions* are key to using resources effectively and how can they be strengthened? Scaled-up but uncertain and volatile aid flows will place increased pressure on fiscal institutions in general and on public financial management (PFM) systems in particular. Strengthening fiscal institutions is therefore crucial to ensuring that spending is efficient.

The rest of the paper is organized as follows: Chapter 2 deals with establishing a medium-term resource envelope for the budget. Chapter 3 explains the considerations that influence the choice of a medium-term expenditure path and provides guidance for setting short-term fiscal targets. Chapter 4 discusses the problems associated with volatility and uncertainty of

⁴By focusing on fiscal issues, this paper complements other recent work in this area. See IMF (2005a); Gupta, Powell, and Yang (2006); and Isard and others (2006).

aid flows and possible steps to mitigate them. Chapter 5 discusses basic reforms for strengthening fiscal institutions so that aid can be used more effectively, drawing on recent IMF Fiscal Affairs Department technical assistance to member countries. It proposes specific measures that will assist countries in this regard, as well as factors that should be taken into account in preparing an action plan for PFM reforms in low-income countries. Summary and policy conclusions are presented in Chapter 6.

2

Establishing a Medium-Term Resource Envelope

The first step in establishing a medium-term resource envelope is to collect information on the intentions of official and private donors. Governments typically lack information on private aid flows, and a part of the aid from official sources is also provided outside the budget. The increase in the average number of donors per country, as well as an increase in the number of aid channels, has complicated the task of gathering accurate information on external flows. The average number of donors per country has increased from about 12 in the 1960s to more than 30 during 2001–05 (World Bank, 2007a). In some sectors, such as health, aid channels have also proliferated, stretching the already weak capacity of low-income countries. Governments should encourage private aid organizations to strengthen their representation in recipient countries, while official donors should reach out to key private donors and invite them to participate in existing donor coordination structures.

Aid characteristics have implications for budget planning and formulation. Earmarking by donors limits flexibility in the use of budgetary resources. When aid resources are earmarked, governments cannot readily reallocate these resources in response to changing macroeconomic conditions and priorities, which hampers the implementation of expenditure plans. Similarly, the requirement for counterpart funds reduces the budgetary resources available for other purposes. The terms of financing also have implications for budget planning and debt sustainability. Grants do not require any budgetary allocation for debt service payments, whereas loans do, thereby establishing a claim on future resources.

Medium-term aid flow projections should reflect the IMF staff's best estimates. Aid flows (both loans and grants) should be projected based on all relevant and available information, including donor commitments and indications. Aid forecasts in IMF-supported programs also need to reflect debt sustainability concerns. Overly optimistic or pessimistic projections should be explicitly justified, because they may complicate fiscal management by creating mismatches between spending and available resources (IMF, 2007a). The costs of overly optimistic aid forecasts are likely to be higher than the costs of overly pessimistic ones, because aid shortfalls might entail fiscal adjustment. To mitigate such costs, spending should be anchored in a medium-term perspective, as outlined below. Aid shortfalls could then be smoothed out over time, as could fiscal adjustment.

Sustaining and increasing the domestic revenue effort is critical to achieving the MDGs. Strengthening revenue-raising capacity is essential to guarding against aid volatility and preparing for an orderly exit from long-term reliance on aid. Moreover, projects financed by scaled-up aid flows will give rise to future recurrent spending, which will need to be financed by domestic resources. Insufficient growth in domestic revenues will either constrain other spending or lower the productivity of existing programs and assets through inadequate provision for operations and maintenance outlays. Care has to be taken to ensure that scaled-up aid does not weaken the incentive to mobilize domestic revenues by relaxing the budget constraint, particularly when institutions are weak (Gupta and others, 2004). However, lowering distortionary tax rates may be part of the strategy of some low-income countries to promote private sector-led development.

Trade liberalization is another important reason to strengthen the domestic revenue base. When trade is liberalized, aid absorption is facilitated and pressures on the real exchange rate are mitigated. However, this liberalization would lower overall revenues, because these countries on average derive one-third of their total revenue from trade taxes (Keen and Simone, 2004). Therefore, trade liberalization would need to be accompanied by a strengthening of indirect taxes. International competition in tax incentives (including those offered to investors in free trade zones) has reduced both the corporate tax revenue and its base in many low-income countries, making it more difficult to recover revenue lost because of trade liberalization. Governments can adapt to this new reality by improving the efficiency of value-added taxes (VATs), which can raise significant revenues in many low-income countries (Selassie and others, 2006). This will require reducing exemptions and broadening the tax base for VATs.

Policies for broadening the tax base and strengthening revenue administration are critical to raising additional revenues in low-income countries. Low revenues are not, in most cases, a reflection of low tax rates—in fact, tax rates are high in many of these countries—rather, they reflect narrow tax bases and weak administrative capacity.⁵ A tax-to-GDP ratio of at least 15 percent is considered a reasonable target for most low-income countries (Selassie and others, 2006). The United Nations Millennium Project (2005) estimated that low-income countries could mobilize additional domestic revenues equivalent to 4 percent of GDP. Improved organizational structure of revenue administration, strengthened audit capacity, and fair tax enforcement all contribute to the expansion of the tax base. Revenue administration reforms are a particularly high priority in many countries in sub-Saharan Africa.

⁵See IMF (2007b) for details.

3

Choosing an Expenditure Path

The IMF's advice and program design encourage aid recipients to spend all aid fully and effectively. How much and how fast scaled-up aid should be spent over the medium term is a function of the following:

- Time profile of expected aid;
- Macroeconomic, sectoral, and administrative capacity of the country to absorb higher aid inflows;
- Likely impact of spending on growth and debt sustainability; and
- Spending efficiency.

Time Profile of Aid

Aid flows to a country can assume different time profiles. They may be compressed over a short period, they may be volatile around a constant or rising trend, or they may rise and remain stable at that level. In the first case, a country may choose to spread higher aid-financed spending over a longer period by saving part of the initial surge in aid inflows. In the second case, the country would need to take aid volatility into account in its spending plans by smoothing fluctuations through domestic borrowing and reserve accumulation in a manner that is consistent with macroeconomic stability. In the third case, the country could have a rising spending profile depending on its absorptive capacity. The choice of a particular spending path will depend on a number of other country-specific factors, which are discussed next.

Absorptive Capacity Constraints

Overall macroeconomic conditions determine how much aid can be spent immediately. For instance, an initially high rate of inflation and low level of foreign reserves may call for a gradual scaling up of spending. In contrast, countries that have reached a mature stage of macroeconomic stabilization are better positioned to use scaled-up aid inflows rapidly (Selassie and others, 2006). Postconflict countries that have not yet stabilized their macroeconomy and have weak institutions may need to save the initial surge in postconflict

aid until their absorptive capacity has improved over the medium term (Gupta and others, 2005). Aid provided in the context of humanitarian relief (for example, food aid) to postconflict countries would need to be spent as soon as their security situation stabilizes.

The ability to absorb aid at the sectoral level may be limited in the short term. The country may not have sufficient teachers or health workers to expand service provision. In this regard, some low-income countries are considering innovative approaches to overcome these supply-side constraints, such as Ethiopia's program to rapidly train and deploy semiskilled workers to address basic health care needs.

Limited capacity to design and administer spending programs effectively can further constrain aid spending. The share of education and health spending devolved to subnational governments is increasing, but the capacity of these governments to implement programs and to ensure that scaled-up resources reach the intended users may be limited. In some sub-Saharan African countries, subnational governments are responsible for about 70 percent of poverty-reducing expenditure (IMF, 2006a, Chapter 5). However, accountability for social and economic outcomes is often weak, and internal controls, auditing, and monitoring and evaluation are hampered by weak accounting, manual procedures, and human capital constraints.

The implication is that some aid may need to be saved in the short term. Studies of recent aid surges in sub-Saharan Africa indicate that many countries saved part of the aid (Aiyar, Berg, and Hussain, 2005; and Foster and Killick, 2006). The remainder of the higher aid flows boosted public savings, which was used in many cases to retire domestic debt. However, there are limits to the scope for saving: donors are reluctant to continually provide aid that is saved, and there are pressures in the recipient country to spend more aid in an effort to improve economic and social outcomes. Furthermore, aid tied to specific projects is difficult to save. Ultimately, the capacity of governments to utilize aid effectively needs to be strengthened over time.

Some aid might be delivered in a regional context. This could be the case for regional institutions, such as the West African Economic and Monetary Union (WAEMU).⁶ In this instance, member countries would still channel

⁶WAEMU is expecting significant resources from international donors, including the World Bank and European Union, to finance its Regional Economic Plan, which foresees investment in infrastructure, human capital, and governance.

aid through their domestic budgetary systems, but they would need to be cognizant of the convergence criteria set in the monetary union.⁷

A preferable approach would be to smooth spending over the medium term. A stable spending path as a share of GDP is viewed as the optimal response to an increase in anticipated resources (Barro and Sala-i-Martin, 1995). An expenditure smoothing approach would imply that spending increases to a new, higher level that is calibrated to be sustainable indefinitely, given the expected value of new aid inflows. This approach would allow for higher spending in the face of natural disasters and national emergencies. Public spending could be front-loaded if there is evidence that (1) the returns to public investment are high;⁸ (2) investment is subject to increasing returns, for example, because of “poverty traps” that require a large boost in public spending to overcome multiple, interconnecting barriers to development at once (Azariadis and Stachurski, 2005); or (3) the benefits of government consumption are significantly higher today than in the future, for example, during a famine or health crisis (Box 1). However, both expenditure smoothing and front-loading could entail borrowing from the domestic banking system, which may not be consistent with the government’s macroeconomic and debt sustainability objectives. Poverty reduction strategies that incorporate a front-loaded approach in public spending would be most appropriate if underpinned by front-loaded aid commitments from donors to reduce fiscal risks.

Spending and Debt Sustainability

The expenditure path chosen should also be consistent with debt sustainability. Higher aid inflows entail broad macroeconomic effects, including on the real exchange rate and interest rates. These, in turn, have consequences for debt sustainability through their effect on domestic interest rates and the exchange rate. For instance, if aid inflows are largely sterilized to prevent Dutch disease effects owing to a real exchange rate appreciation, then domestic interest rates could increase significantly, putting pressure on public debt dynamics. On the other hand, a sudden decline in aid inflows could result in a real depreciation, increasing the burden of the external debt. Moreover, the need to ensure a sustainable public debt path becomes even more essential to the extent that scaled-up aid inflows are provided as loans, even on concessional terms. Sustainability can also be affected by the impact of spending on growth, which is in turn related to its composition and efficiency.

⁷WAEMU is considering proposals for alternative convergence criteria to accommodate expenditure financed by aid flows.

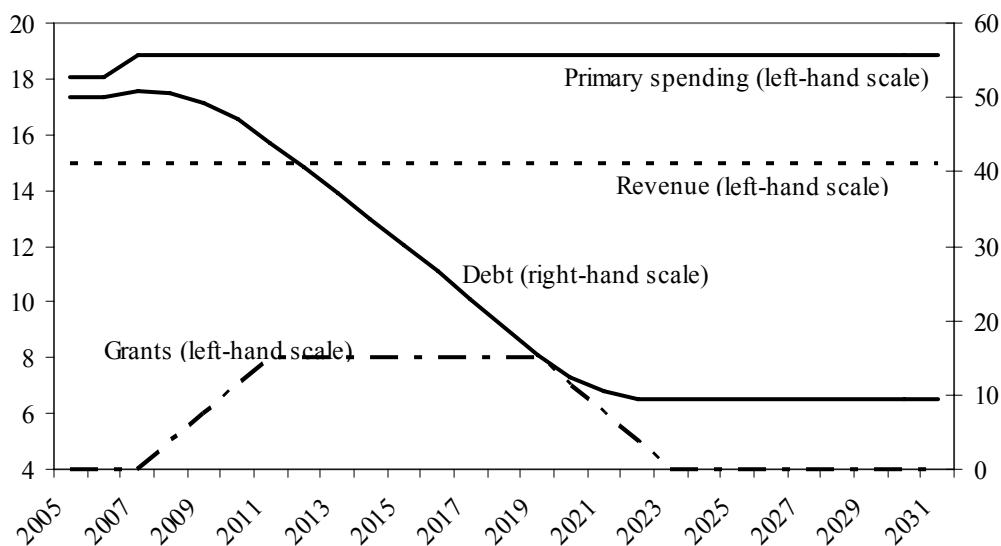
⁸For example, Takizawa, Gardner, and Ueda (2004) find that spending oil wealth up front can be appropriate when the initial capital stock is far below its steady-state level and the return to investment is therefore high.

Box 1. Choosing an Expenditure Path When the Resource Envelope Is Expanding

A key decision in medium-term fiscal frameworks (MTFFs) relates to the choice of an appropriate spending path. In general, three specific stylized options are available: smoothing, front-loading, and saving.

- The expenditure smoothing approach would imply that governments keep spending fairly stable as a share of GDP. In a scenario of scaled-up aid, the smoothing approach would imply that spending increases to a new, higher level when aid is scaled up. The new spending level is calibrated to be sustainable indefinitely, given the expected present value of the new aid inflows. The figure below presents a stylized case of this approach in which aid jumps to a new, higher level for a few years and diminishes in the long run. Part of the temporary aid surge is spent, but part is saved, reducing debt. Interest savings from lower debt allow stable spending as a share of GDP even after the aid surge diminishes.

The Smoothing Approach
(In percent of GDP)



Source: IMF staff calculations.

- The front-loaded approach would have spending increase rapidly when aid is scaled up, gradually declining thereafter as a share of GDP, either because spending is reduced in real terms (relative to the smoothing approach) or because real GDP grows faster as a result of increased public investment. Front-loading is most appropriate when absorptive capacity is not a bottleneck, government investment is subject to high or increasing returns, or the benefits of government consumption are significantly higher today than

Box 1 (*concluded*)

in the future, for example, because of a famine or a temporary medical crisis. However, front-loading also entails considerable risks. If future aid flows or the impact of government spending on economic growth turn out to be lower than expected because of poor quality of spending or waste, the approach may lead to unsustainable spending levels that may trigger debt distress or abrupt adjustments, particularly when countries already have high debt.

- The saving approach would imply that most additional aid would initially be saved, with spending rising only gradually while reserves are built up (or debt is reduced). Spending as a share of GDP would then gradually rise over time, eventually stabilizing at an even higher level than under the smoothing approach, because the higher assets (or lower debt) would increase interest income (or lower interest spending). The approach may be appropriate in situations in which macroeconomic stability is yet to be achieved or spending efficiency is low and expected to increase only over time. However, there are limits to the approach. In particular, donors may not be willing to provide aid to build up reserves rather than increase spending for achieving the Millennium Development Goals and other social or economic objectives. Therefore, a pure saving approach can be only a temporary solution while low-income countries' governments strengthen their capacity to spend aid efficiently.

Spending and Growth

The composition of public spending can influence growth.⁹ The higher aid-financed public spending could affect both growth and the sustainability of public debt (see above). Expenditure composition can potentially affect growth, for example, by “crowding in” private investment with increases in public infrastructure spending, but also via other channels that relate to social spending on health and education. The crowding-in effect has been identified using different data sets and approaches in the literature, and reflects complementarities between public infrastructure and private investment.¹⁰ The empirical link between public investment and overall growth is sensitive to the methodology and data used.

For instance, estimates of the response of growth to higher public investment range from no impact at all to an increase of 0.7 percentage point in cross-country econometric studies (IMF, 2005c; and Gupta, Powell, and Yang, 2006). However, these studies might not shed adequate light on the

⁹For a detailed discussion of these issues, see World Bank (2007b).

¹⁰Strengthened domestic financial intermediation is also important in this regard to marshal increased private savings into productive investment projects.

short-term impact of higher public investment or capture the potential impact of a substantial scaling up of public investment.¹¹ The success of higher public investment ultimately depends on introducing effective institutions to channel resources into projects that eliminate growth bottlenecks. The growth effects of education and health spending, which have a long-term impact, are more difficult to estimate. The estimates in the literature suggest that a 1 percent of GDP increase in such spending can have a long-term effect, ranging from 0.5 to 1.0 percent of GDP, provided resources are spent efficiently and fiscal institutions are strong.

Different aid-financed spending programs can have different consequences for growth. Aid flows can be broadly categorized according to whether the associated activities (1) can be reasonably expected to enhance growth over the short to medium term, (2) are focused on long-term growth, and (3) are not directly related to growth.¹² External project assistance for infrastructure can boost growth over the short to medium term, provided that sound capital budgeting procedures to prioritize projects with high rates of return are adopted as described above. Increased public spending to halt environmental degradation, support better governance or judicial systems, and improve health and education outcomes would act indirectly to increase long-run growth through higher labor productivity. On the other hand, spending associated with humanitarian aid sustains consumption following negative shocks. In this manner, the modality for scaling up aid can affect the allocation of public spending, and thereby growth and the sustainability of public debt. However, appropriate caution is required in projecting growth effects of spending in Debt Sustainability Analyses (DSAs),¹³ especially in countries where fiscal institutions are weak.

Spending Efficiency

The relative efficiency of public spending can also affect growth and debt sustainability. Inefficient spending only adds to future debt burdens without a commensurate improvement in social and economic outcomes. Furthermore, improving economic and social outcomes through scaled-up aid requires both spending more and spending more efficiently. In this context, an initial analysis of health and education spending found significant

¹¹Growth studies typically consider the impact of an incremental increase in public investment. See Gupta, Powell, and Yang (2006) for details.

¹²See Clemens, Radelet, and Bhavnani (2004), as well as Gupta, Powell, and Yang (2006).

¹³For a more detailed discussion, see IMF and World Bank (2006).

room for increasing efficiency in many low-income countries (Appendix 2). Three results stand out:¹⁴

- There is significant variation across countries and regions in the relative efficiency of health and education spending.
- Good governance and the quality of fiscal institutions have a strong positive correlation with the efficiency of spending.¹⁵ Countries with better governance and fiscal institutions have higher relative efficiency scores.
- Volatile aid flows have not generally been passed through into public spending, contributing to relatively stable efficiency scores. This evidence suggests that as long as aid volatility does not translate into higher volatility in spending, the relative efficiency of spending is not affected.

Expenditure Path and Fiscal Targets

The medium-term spending path should anchor the fiscal framework. Typically, medium-term fiscal planning begins with a target for the fiscal balance that is consistent with a sustainable path of public debt and macroeconomic stability. In this situation, the ceiling on public expenditure is derived residually, given the forecast for domestic revenues and a sustainable fiscal balance. Scaling up of aid increases the available resources, creating a range of spending paths that are consistent with the medium-term fiscal framework (MTFF). Countries should choose a stable medium-term spending path that is consistent with absorptive capacity constraints and debt sustainability.

Annual fiscal balance targets should be consistent with the medium-term expenditure path. The choice of the precise fiscal indicator to be targeted should be decided on a case-by-case basis (see Box 2 for a discussion on fiscal targets in IMF-supported programs). Focus on the overall balance, including external grants, would allow scaled-up aid to pass through into higher public spending without deterioration in the reported fiscal position. However, it is useful to complement this indicator with other measures of

¹⁴The results should be interpreted with caution. First, sectoral outputs/outcomes depend on more than just sectoral spending—some factors can only be partially captured through control variables. Second, the focus on quantitative inputs and outputs/outcomes fails to account fully for qualitative factors. And third, in a cross-country analysis, efficiency is measured in relative terms. A country with a better “efficiency score” is only relatively more efficient than others—not necessarily in an absolute sense.

¹⁵This part of the analysis was limited to health spending because of data limitations.

fiscal sustainability.¹⁶ For instance, the overall balance excluding grants is a key indicator of fiscal policy's effect on aggregate demand. In addition, countries should carefully monitor the debt-stabilizing primary balance to avoid incurring an unsustainable debt burden during the scaling-up process. The domestic balance is another fiscal indicator that is used in several countries to anchor the fiscal framework.¹⁷ However, the domestic balance may be problematic, because scaled-up aid would result in higher domestic spending in priority areas (for example, health and education), which would in turn result in a significant deterioration of the reported domestic balance. This may indicate the extent to which the import component of spending should be increased to facilitate the absorption of scaled-up aid.

Some Poverty Reduction and Growth Facility (PRGF)-supported programs have included ceilings on government wage bills as an instrument to promote macroeconomic stability and to improve the quality of government spending, but their incidence is on the decline. The share of such programs with wage bill ceilings declined from 40 percent during 2003–05 to about 30 percent as of May 2007. Critics have argued that ceilings on the government wage bill have prevented countries from expanding employment in social sectors, even when concessional financing was available, and that this has had adverse implications for meeting the MDGs. However, a recent review indicates that the use of wage bill ceilings reflected valid concerns regarding macroeconomic stability and the need to keep critical nonwage spending, such as for medicine, books, and public investment, in line with budget priorities (Fedelino, Schwartz, and Verhoeven, 2006). Moreover, they provided sufficient flexibility to expand employment in priority sectors when external financing was available. As such, they can be and are regularly adjusted in IMF-supported programs as resource availability and priorities change.

Wage bill ceilings have typically covered the overall government. In no instances have wage bill ceilings been defined for a specific sector, such as education or health. Indeed, in some cases, priority sectors, such as education, have been excluded from the wage bill ceiling (for example, in Benin).

Wage bill ceilings should be used in IMF-supported programs only in exceptional cases. These are a second-best option for controlling wage spending. In particular, their use should be based on the following:

¹⁶If grants are volatile and countries smooth expenditures, then the overall balance including grants could be a relatively volatile indicator. In such circumstances, it would be useful to also look at other, more stable, fiscal indicators to monitor short-term fiscal developments.

¹⁷The domestic balance excludes external grants, foreign interest payments, and externally financed project spending.

Box 2. Fiscal Targets in IMF-Supported Programs

Fiscal targets in IMF-supported programs have been criticized for preventing faster progress toward achieving the Millennium Development Goals. In particular, some critics contend that IMF-supported programs that include targets on the fiscal deficit excluding grants have prevented countries from increasing spending when grant financing exceeds program assumptions, even though such spending would not add to the debt burden. Moreover, the use of asymmetric adjusters in IMF-supported programs has also been criticized, because they prevent spending from increasing when aid inflows exceed projections by reducing domestic financing to a certain extent, while allowing for only a partial increase in domestic financing when aid inflows are below projections, thereby requiring spending to be reduced.¹

The evidence from IMF-supported programs is more varied in this regard:

- Often, program design accommodated all programmed aid flows. A recent independent review of IMF-supported programs in sub-Saharan Africa (IEO, 2007) noted that, in countries with low inflation, programs were designed flexibly to spend almost all of the anticipated aid.
- Most programs did not constrain capital spending financed by project-related grants (see table below).² However, these programs usually did not allow additional aid to be used for current spending. IMF-supported programs also included a ceiling on net credit to government, sometimes as a complement to the fiscal balance target and sometimes independently. In these programs, the degree to which additional external financing could be spent depended on the design of fiscal adjusters.

¹Goldsbrough (2006) summarizes the key arguments of the IMF's critics and the IMF's response.

²Findings are based on the most recent IMF staff reports for 43 Poverty Reduction and Growth Facility (PRGF)-supported programs approved by the IMF's Executive Board during 2002–06. In 14 out of 22 PRGF arrangements with fiscal balance targets, all foreign-funded investment was excluded from the targets. For seven countries, the targeted balance included grants (and the investments financed by these grants). The various programs used a variety of deficit concepts, and only six included a ceiling on the overall fiscal deficit. Twelve countries targeted the primary balance, and four targeted the basic balance (also called the current balance, that is, excluding capital revenues and expenditures). For a review of how aid has been accommodated in PRGF programs, see IMF (2007a).

- Clear justification. The rationale for wage bill ceilings should be guided by macroeconomic considerations. Program documentation should justify their use in a transparent manner, including their consistency with the MDGs.
- Limited duration. Wage bill ceilings are a temporary device. Governments should tackle the root causes of wage-related fiscal problems, such as the need for civil service reform and strengthened payroll management.

Looking ahead, program design should continue to use fiscal balance targets and adjustors that respond best to country-specific conditions when aid is scaled up. Where macroeconomic conditions permit, fiscal targets should allow maximum flexibility for spending additional aid. Adjustors in IMF-supported programs should be designed to avoid having to cut back priority expenditures in response to aid shortfalls.

Short-Term Fiscal Targets in PRGF Countries ¹

	Fiscal Balance Targets						Other Targets			
	Number of countries	Overall balance	Primary balance	Basic balance	Balance including grants	Balance excluding foreign-financed investment	NCG	NDF	Adjustor ²	Asymmetric adjustor ³
Total	43	6	12	4	7	14	21	16	39	20
AFR	25	—	8	3	—	11	13	11	23	13
APD	4	—	1	—	—	1	1	3	4	3
EUR	2	1	—	—	1	—	1	0	2	—
MCD	6	3	1	1	3	2	4	0	5	2
WHD	6	2	2	—	3	—	2	2	5	2

Source: IMF staff reports.

¹Data are based on the latest staff reports for 43 countries with Poverty Reduction and Growth Facility (PRGF) programs approved in 2002–06, and cover only performance criteria on fiscal balance, net domestic financing (NDF), or net credit to the government (NCG) from the banking sector in program conditions. Countries are grouped according to coverage by IMF departments: AFR=African Department; APD=Asia and Pacific Department; EUR=European Department; MCD=Middle East and Central Asia Department; and WHD=Western Hemisphere Department.

²Adjustors exist for excesses and/or shortfalls in external assistance relative to program baselines.

³The adjustors for excesses or shortfalls in external assistance differ.

- Sufficient flexibility. Wage bill ceilings should be sufficiently flexible to accommodate spending of scaled-up aid, particularly for sustainable donor-financed employment in priority sectors, such as education and health.
- Periodic reassessments. The need and rationale for wage bill ceilings should be reassessed at the time of program reviews.

It is expected that over time the need for wage bill ceilings will decline further. Although wage bill ceilings may still be needed on occasion, the use of medium-term frameworks (MTFs) and effective budget and payroll

systems will gradually obviate the need for them. Countries, in collaboration with donors, are putting considerable efforts into strengthening such systems.

Updating Baseline and Alternative Scenarios

The baseline projection should be updated as new information is obtained. The medium-term fiscal policy framework (see Chapter 4) should be informed by the authorities' projections for external aid, domestic revenue, expenditure, and public debt. Small, temporary shortfalls in aid can be smoothed out through additional domestic borrowing or drawing down buffers, but a substantial aid shortfall calls for revising the expenditure path by cutting low-priority outlays. As anticipated aid inflows change, baseline expenditure projections should be updated to ensure that the medium-term expenditure path remains consistent with a sustainable public debt profile.

Countries may want to develop alternative “scaling-up scenarios” to facilitate more ambitious aid inflows compared with baseline expectations. Alternative scaling-up scenarios enable recipient countries to assess the implications of higher recurrent spending and the sustainability of the fiscal framework. They also can help countries identify the policies required to alleviate Dutch disease effects, skills shortages, and other bottlenecks.

Dealing with Aid Uncertainty and Volatility

Aid volatility complicates fiscal policy implementation. Aid flows are more volatile than revenues (Bulíř and Hamann, 2007) and significantly more volatile than remittances (Gupta, Pattillo, and Wagh, 2007). Moreover, such volatility has increased over time. The relative volatility of aid, even for HIPCs, with respect to revenue (when variables are expressed as a share of GDP) has increased to 62 in 2000–03 compared to 25 in 1995–98 (Bulíř and Hamann, 2007) (see Appendix 1). This problem is likely to worsen, for two reasons. First, even if the volatility of aid does not change, a larger aid volume implies that a larger portion of the budgetary spending would be aid financed and thus subject to volatility. Second, the volatility of aid itself may increase because of shifts in the composition of aid away from project aid and toward budget support and program loans. A rising share of budget support can aggravate aid volatility because of the inability of donors to make long-term commitments for budget support.

Aid recipient countries can take several steps to mitigate the effects of aid volatility and uncertainty:

- Conduct stress tests on baseline projections to assess the impact of aid volatility. Subjecting MTFs (and DSAs) to periodic stress tests can help identify short-term financing risks. The impact of aid shortfalls on the budget should be assessed regularly through such tests.
- Build up reserve buffers to sustain spending if shortfalls materialize. Countries can also self-insure against aid volatility by accumulating reserves that can be drawn down in the event of a temporary aid shortfall. The size of the buffer should be determined on a case-by-case basis but could vary from 50 to 100 percent of annual aid-financed spending (Eifert and Gelb, 2005). Such a buffer would supplement other reserves that countries might accumulate to provide cover for imports or short-term debt, and enable countries to smooth expenditures without recourse to costly bridge financing from their domestic banking systems in the event of an aid shortfall.¹⁸ However,

¹⁸Bulíř and Hamann (2006) show that negative aid shocks coincide with negative income shocks, and propose building a reserve cushion to insure against aid shortfalls.

building up reserve buffers also requires that countries have in place appropriate strategies to invest and manage the reserves efficiently during aid windfalls.

- Identify priority spending to be safeguarded from cuts in the event of an aid shortfall. This would ensure that critical programs are not starved of funds in the face of aid volatility. This policy is easier to adopt when such spending is defined in the Poverty Reduction Strategy Papers (PRSPs) or similar country documents, and when the PFM systems are capable of monitoring budgetary allocations to specific spending programs and their outturns.
- Build elements of flexibility into spending programs. Designing spending programs so that they can be scaled up or down in response to fluctuating aid disbursements can mitigate the adverse effects of aid volatility. For example, wage spending could be made more flexible by using temporary and flexible employment contracts; contracting out services could be another option.
- Include appropriate adjustors in IMF-supported programs to fully or partially accommodate aid volatility. Recent studies have shown that low-income countries respond to aid volatility by adjusting domestic financing and expenditure, but that this response appears to be asymmetric—in particular, aid shortfalls lead to cuts in domestic investment spending while governments do not increase such spending in response to aid windfalls.¹⁹ Accordingly, adjustors in IMF-supported programs should be designed to avoid a cutback of critical spending, such as domestic investment, when aid falls short of program projections. The degree to which shortfalls should be financed and windfalls saved depends on country-specific considerations, such as macroeconomic stability, absorptive capacity, and debt sustainability.

Long-term donor commitments can reduce aid volatility. The international community has pledged to provide more predictable and multiyear commitments on aid flows (Paris High Level Forum, 2005). Implementing the agreed-upon steps would help reduce the uncertainty and volatility of aid. Some bilateral donors are moving toward longer-term aid commitments. For example, the United Kingdom has provided a 10-year commitment on development assistance to Rwanda and Ethiopia. Similarly, the United Kingdom Department for International Development (DfID) has agreed to provide six-year program support for the health sector in Malawi under the Sector-Wide Approach. In addition, initiatives such as the International

¹⁹Celasun and Walliser (2006). IMF (2007b) discusses these findings in more detail. Our analysis, however, indicates that health and education spending is relatively unaffected by aid volatility.

Financing Facility for Immunization, which is designed to provide “front-loaded, reliable funding over a number of years,” can reduce aid volatility.

Certain types of arrangements facilitate long-term donor commitments. Simple, formalized partnership agreements between aid recipient countries and donors help to deliver multiyear aid commitments in a systematic fashion. Recent examples of such successful collaboration are donor groups in Burkina Faso, Ghana, Mozambique, and Tanzania. Typically, such donor groups serve to jointly monitor both aid commitments and disbursements regularly, within a predefined performance framework. This has improved aid predictability and fiscal programming in these countries.

Countries should strive to ultimately avoid long-term reliance on aid. Besides strengthening the domestic revenue base, other elements of this strategy include strengthening countries’ debt management capacity and fiscal institutions, including PFM systems (see Chapter 5). This would ensure that resources are used both efficiently and effectively.

Strengthening Institutions to Promote Effective Utilization of Aid

Ensuring efficient public expenditure calls for strengthening fiscal institutions, including PFM systems.²⁰ Sound and effective PFM systems are important for several reasons: (1) to increase the prospects of achieving key economic and social priorities; (2) to support transparency and accountability—that is, to ensure that the government is held responsible for managing public resources and that donors and taxpayers have access to information about the allocation and use of such funds; and (3) to reduce the transaction costs of aid-related donor requirements. Weaknesses in PFM systems can undermine budgetary planning, execution, and reporting and result in leakage of scarce public resources.

Weaknesses of Existing Public Financial Management Systems in Low-Income Countries

A number of recent diagnostic studies have evaluated the quality of fiscal institutions and PFM systems in low-income countries.²¹ The results of these assessments are summarized below.

- *The HIPC Assessments and Action Plans (HIPC-AAP)*, prepared jointly by the IMF and World Bank, covered 23 eligible low-income countries in 2001 and 26 in 2004.²² These assessments provided the

²⁰PFM comprises the institutional framework, systems, and procedures that govern the preparation, execution, and reporting of the budget. The goals of good PFM systems are threefold: (1) overall control and sustainability of public finances; (2) allocation of budgetary resources to sectors and programs in line with government priorities (for example, as set out in the PRSPs and MDGs); and (3) the efficient delivery of public goods and services to final users.

²¹Other studies include the IMF's Report on the Observance of Standards and Codes (ROSC) Fiscal Transparency Module; World Bank assessments, including Public Expenditure Reviews, Public Expenditure Management and Financial Accountability Reports, Country Financial Accountability Assessments, and Country Procurement Assessment Reports (CPARs); and reports prepared by the multipartner Public Expenditure and Financial Accountability (PEFA) program. For a useful assessment of the available data, see Chapter 6 of World Bank (2006).

²²The results of both assessment exercises are summarized in IMF and World Bank (2005).

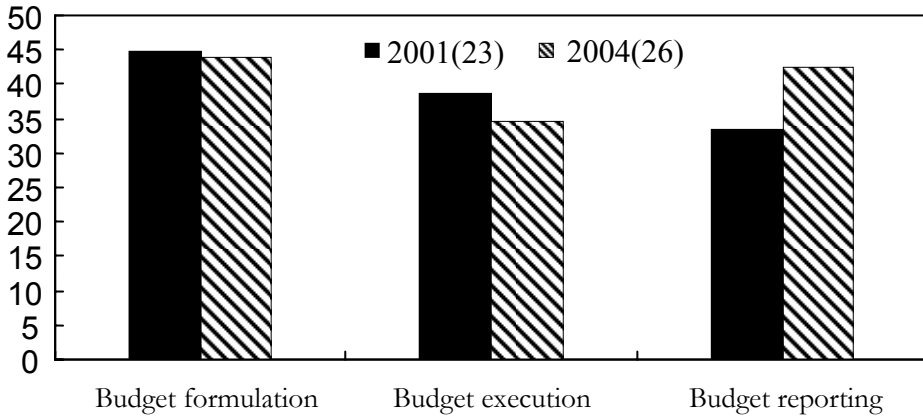
first opportunity to undertake periodic PFM assessments in such countries aimed at measuring progress over time. The 2004 assessment concluded that 19 of the 26 countries assessed still required substantial upgrading of their PFM systems. Budget execution and the ability of countries to track poverty-reducing expenditures were especially weak (Figure 1).²³

- *Report on the Observance of Standards and Codes (ROSC) Fiscal Transparency Module* for a sample of 28 PRGF-eligible countries suggests that, in certain areas of fiscal transparency, the performance of low-income countries is not out of line with that of more advanced economies. However, their performance is generally weak in many other areas that are important to a well-functioning PFM system, such as a comprehensive and credible budget and effective audit procedures (Figure 2).
- *The Public Expenditure and Financial Accountability (PEFA) assessments*, which began only in 2005, cover just 12 PRGF-eligible countries, although the coverage is expected to expand quite rapidly. Early results suggest a pattern of relatively poor performance across the board in key areas of budget preparation and execution, with a median score of about 2.0 against the international good practice standard of 4.0 (Figure 3).²⁴
- *The World Bank's Country Policy and Institutional Assessment (CPIA) ratings* also display a picture of relatively poor performance by many low-income countries. These ratings are based on an assessment of whether the countries concerned have a comprehensive and credible budget, effective financial management of revenues and expenditures, and timely and accurate fiscal reporting. For 27 countries reviewed in OECD (2006b), scores ranged from 2.0 (weak) to 4.5 (moderately strong) (Figure 4).

²³Dorotinsky and Floyd (2004) concluded that, although budget formulation has improved in a number of countries, budget execution and accountability are still weak in the majority. Thus, fewer than one-third of the countries surveyed had budget outturns that were close to the budget as adopted, and 90 percent of African countries surveyed failed to complete final audited accounts within 12 months of the end of the fiscal year, thus rendering meaningful parliamentary oversight impossible.

²⁴PEFA is a partnership whose members include the World Bank, the IMF, the European Commission, and several bilateral donors. The PEFA framework incorporates a four-point rating system (A to D, with intermediate ratings also permitted) compared with the three-point scale (A, B, C) used for the HIPC-AAP assessments. See PEFA Secretariat (2005) and its website, www.pefa.org, for further information.

Figure 1. HIPC-AAP: PFM Performance by Key Categories
(Number of countries meeting benchmarks in percent of total)¹

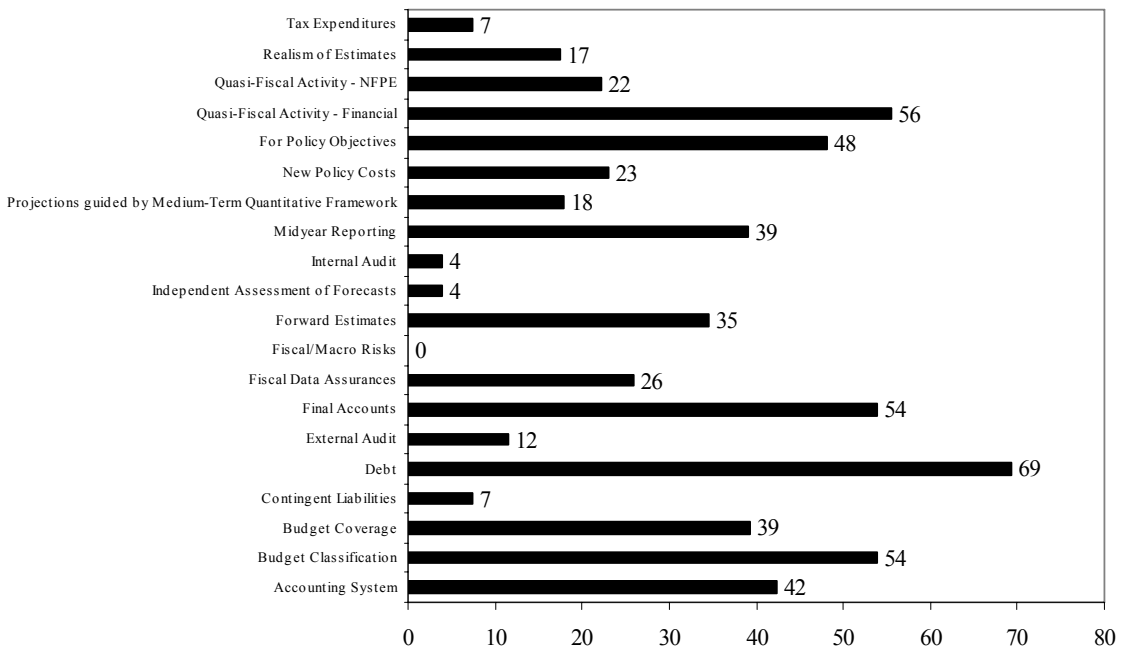


Source: IMF and World Bank estimates.

Note: HIPC-AAP = Heavily Indebted Poor Countries Assessments and Action Plans; PFM = public financial management.

¹Total number of assessed countries in each year is given in parentheses.

Figure 2. Fiscal ROSC Assessments, 1999–2005: Fiscal Transparency
Performance in PRGF-Eligible Countries ¹
(Percent of countries with strong performance in total)

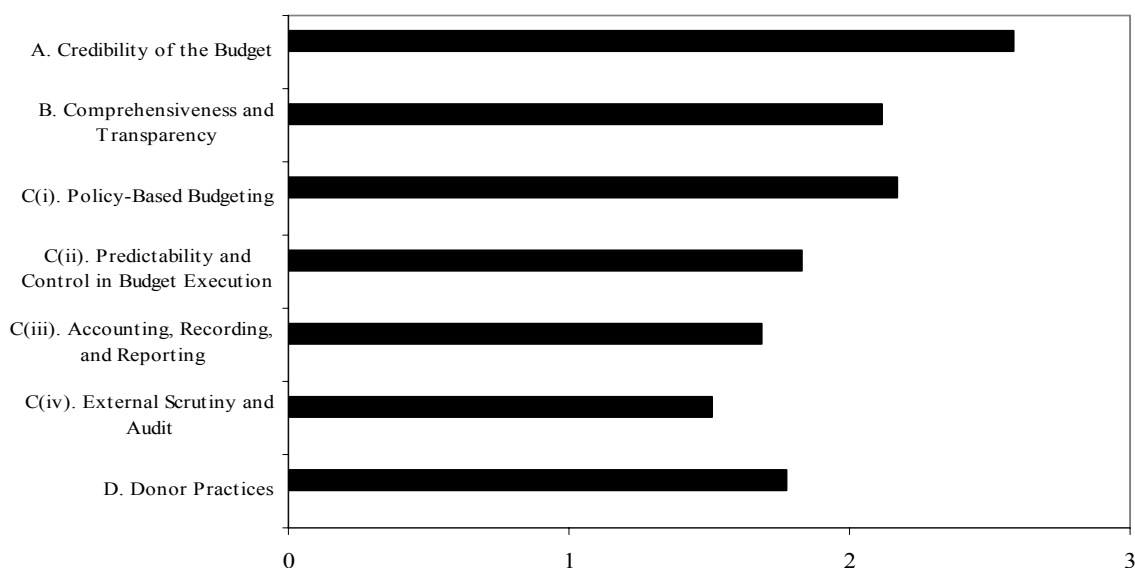


Source: IMF staff estimates.

Note: NFPE = nonfinancial public enterprises; PRGF = Poverty Reduction and Growth Facility; ROSC = Report on the Observance of Standards and Codes.

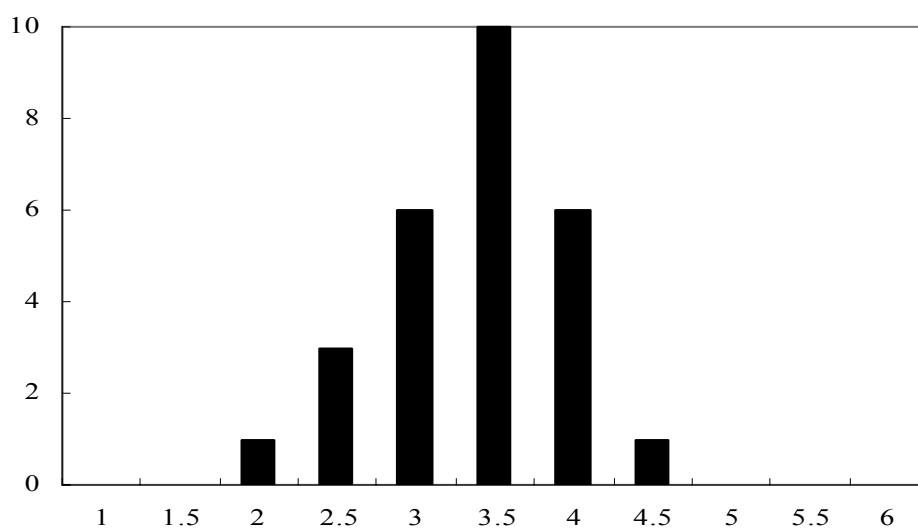
¹Based on IMF ROSC Fiscal Transparency Module for 28 PRGF-eligible countries between 1999 and 2005.

Figure 3. PEFA Assessments Undertaken During 2005–06: Aggregate PEFA Ratings by Indicator Categories
(In aggregate score; perfect score = 4)



Source: Data provided by the Public Expenditure and Financial Accountability (PEFA) Secretariat.

Figure 4. CPIA: Quality of Partner Country PFM Systems in 2005 ¹



Source: World Bank, Country Policy and Institutional Assessment (CPIA subcomponent 13) 2005.
Note: The ratings of PFM systems are based on the following criteria: 1, very weak; 2, weak; 3, moderately weak; 4, moderately strong; 5, strong; 6, very strong.

¹OECD (2006b).

- *Recent evaluations of the IMF's technical assistance activities in low-income countries reached a similar conclusion.* One evaluation concluded that, in many countries, budget plans were based on unrealistic assumptions, were not comprehensive, and lacked a medium-term focus; accounting and payments systems and other areas of budget execution were weak; budgetary institutions were fragmented; and broader institutional problems such as weak legislative oversight and poor accountability of senior budget officials were common.²⁵ In some countries reviewed, civil conflict had added to these problems.

The broad conclusion is that, despite sustained efforts in many countries—supported by international financial institutions and donors—to undertake PFM reforms, progress has been uneven. Some countries, such as Ghana, Mali, Mozambique, and Uganda, have shown capacity for quite rapid improvement in their PFM systems, especially those that have promoted reforms in budget management and given incentives to civil servants for better performance (World Bank, 2006). However, reform of PFM systems in many other countries has stagnated. The uneven pattern of progress may reflect changes in political leadership or in the management of key departments, such as the budget office or the national treasury, that are critically important to the reform process. Other reasons include weak capacity in many countries and overdependence on foreign advisors. Another important lesson is that countries have not always prepared an action plan for reform that is well structured and realistic about the prioritization and phasing of reform measures, given the countries' limited capacity.

It is therefore critical that countries focus on strategic PFM reforms and sequence them appropriately, consistent with the country's capacity to undertake them. Continued capacity building in public debt management, to help countries develop their own Medium-Term Debt Strategy (MTDS), is also crucial.²⁶ The PFM measures described below are those judged to be especially important in the short term. Work on implementing many of these measures, however, will need to be sustained over a period of years if they are to become fully effective.

Countries that are emerging from conflicts or have suffered major disasters face special challenges in strengthening their fiscal institutions.²⁷ These countries have generally received large injections of aid resources that their PFM systems often are not able to cope with, either because of the logistics

²⁵See IMF (2004), which reviewed the technical assistance operations in sub-Saharan Africa of the IMF's Fiscal Affairs Department.

²⁶For a detailed discussion see IMF and World Bank (2006).

²⁷See Gupta and others (2005) and Schiavo-Campo (2007) for more details.

of handling a sudden increase in inflows of aid, or because institutions and PFM capacities have been significantly weakened and cannot respond adequately or meet donor expectations. In the experience of many postconflict or disaster-affected countries, there is often a sudden influx of foreign experts to work alongside national staff or sometimes even run the central fiscal institutions until national staff can take over. In such cases, both the focus of PFM reforms and the perception of where the main weaknesses are concentrated may be different from what has been described above. These issues are highlighted in Box 3.

Overall Strategic Planning

The strategic planning process should be anchored in the budget process to help the government achieve its medium- and long-term policy objectives, as defined in the PRSP and MDGs. This includes strengthening the relationship between the planning and budgeting cycles, strengthening the role of the cabinet in strategic decision making, closer integration of the recurrent and development budgets, consolidating responsibility for preparing and executing the budget within the finance ministry, and increasing the coverage of donor-funded development projects in the budget. Another important issue is the development of a top-down budgeting approach that focuses on the correct sequencing of budget decisions—starting with agreement by the cabinet on the overall resource envelope and broad allocations to sectors, and followed by negotiation between the finance ministry and line ministers on detailed expenditure allocation by chapter or line item. Top-down budgeting is often associated with the development of a medium-term approach to budgeting described in the following section. Both require sufficient capacity and effective coordination of decision making through the cabinet, to achieve good results. Some reforms are likely to take many years to become fully effective and functional. In cases in which the planning and finance functions are managed by separate ministries, strong coordination between the two is needed.

Developing a Medium-Term Approach to Budgeting

In an environment of scaled-up aid, a key challenge for low-income countries is to ensure that additional spending helps to achieve the MDGs and maintain macroeconomic stability. Achieving the MDGs will require undertaking ambitious spending programs spanning several years. Financing requirements for such programs may exceed immediate aid commitments. Consequently, countries need to take a longer-term view of their spending needs and potential resource availability—both domestic and external—in fiscal policy formulation. This can be achieved by anchoring fiscal policy in

Box 3. Strengthening Public Financial Management in Postconflict and Disaster-Affected Countries ¹

Postconflict countries provide insight into the challenges and opportunities that scaling up aid more widely may pose to their public financial management (PFM) systems. The countries concerned may also display special circumstances that affect PFM issues and priorities, such as the following:

- There is a greater need to consider PFM reforms within the context of any emerging political and constitutional debates. Postconflict countries are often in a state of political and constitutional flux. Early PFM reforms may favor greater centralization of control to increase efficiency, whereas political forces may pull in the opposite direction.
- Potential loss of physical and institutional infrastructure can greatly increase the capacity constraint faced by the recipient country. Postconflict countries have often experienced some form of regime change, and key government positions may be filled by international experts, diluting local capacity.
- Large off-budget donor expenditures can increase the volatility of aid revenues as the emergency phase recedes. Changes in donor priorities and withdrawal of support can lead to large projects suddenly being brought on-budget. In the short run, this can crowd out other budget items and lead to ad hoc changes in appropriations.
- The right balance must be struck between slow, thorough approaches and fast, pragmatic solutions. In emergency situations, it becomes harder to undertake rigorous reviews to tackle fundamental issues and a strategic approach to planning and sequencing PFM reforms.
- Postconflict countries often have a larger, concentrated donor presence, which can facilitate coordination of priorities and systems, if well managed.

PFM reforms that are likely to require priority attention in postconflict countries include the following:

- Establishing/strengthening the central budgetary institution.
- Preparing a credible annual budget with clear and reliable estimates. The first step in many cases is the formulation of an emergency budget, which is by necessity rapidly constructed and subject to revision.
- Developing a clear government accounting system that can track the use of budget appropriations, produce clear reports on outturns, and support the government's financial reporting obligations.
- Undertaking a review of the legal and regulatory framework for budget preparation and execution (which may be necessary if regime change leads to rejection of the existing legal framework).
- Taking initial steps to harmonize the medium-term fiscal and strategic planning framework so that it transparently shows both donor commitments and planned transfers to the government's budget.

¹Countries such as Rwanda (1994), Bosnia and Herzegovina (1995), Kosovo (1999), Timor-Leste (1999/2000), Sierra Leone (2000), the Islamic Republic of Afghanistan (2001), the Democratic Republic of the Congo (2002), and Iraq (2003) experienced sharp increases in the volume of aid flows following the cessation of periods of conflict. In others, such as Honduras (1998) and Sri Lanka (2004), the international community provided support following devastating natural disasters.

an MTF.²⁸ Such frameworks can help align the budget with the government's medium-term planning goals, such as progress toward the MDGs and the Poverty Reduction Strategy. In general, MTFs set the overall spending limit, allocate the annual spending envelope across different sectors, and then allocate sectoral spending across different programs and projects. The instruments corresponding to these three tasks are as follows:

- **Medium-term fiscal frameworks (MTFFs):** The MTFF outlines the fiscal framework based on projections for broad fiscal aggregates that are consistent with key macroeconomic variables and fiscal targets. Broad fiscal aggregates (for example, revenues and expenditures) are projected based on the expected evolution of macroeconomic variables (for example, growth and inflation) and policy measures. Projecting a realistic path for scaled-up aid is essential to underpin overall spending growth. As noted earlier, the MTFF should be reexamined and updated at least annually to reflect recent developments and shocks to the macroeconomic outlook.
- **Medium-term budget frameworks (MTBFs):** The MTBF goes further than the MTFF by allocating the overall spending envelope across sectors (for example, health and education), based on the country's development priorities, as set out in the PRSP or the national development plan.
- **Medium-term expenditure frameworks (MTEFs):** The MTEF outlines the sectoral allocation of spending across programs and projects according to government priorities, based on detailed costing from sectoral analysis. The MTEF also involves a more detailed indication of performance objectives and measures.

Most low-income countries lack adequate capacity to adopt a comprehensive MTEF, but many have the rudimentary form of an MTFF and MTBF in place. Those countries that lack MTFFs could draw on the macroeconomic scenarios developed in the context of DSAs for a basic MTFF. To develop MTBFs, important steps include strengthening the government's strategic decision-making procedures regarding the budget (for example, by involving the cabinet), improving the relationship between the national planning and budget processes (and between the ministries of finance and planning), and strengthening capacity to prepare sectoral ceilings and estimates on the basis of an improved economic and functional classification of budgetary revenues and expenditures.

Designing and implementing an MTEF, however, is a complex and challenging process that needs to be approached cautiously and step by step.

²⁸See, for example, Heller and others (2006).

Successful adoption of an MTEF requires, among other things, (1) a capacity for making realistic forecasts of macroeconomic variables over the medium term; (2) procedures for estimating fiscal developments beyond the current and upcoming fiscal years; (3) a review of the decision-making processes of government and associated institutional arrangements; and (4) enhanced coordination between the finance ministry, the planning ministry, and other central agencies and line ministries through the cabinet or cabinet committees. For these reasons, MTEFs have proved difficult to implement in many developing countries: necessary institutional adjustments have not been made and the MTEF has not been fully integrated into the annual budget process²⁹ (Box 4). A recent IMF review concluded that developing an MTEF can be effective when circumstances and capacities permit; otherwise, it can be a great consumer of resources and may distract attention from immediate needs such as improving the annual budget execution process (IMF, 2006b; and World Bank, 2006).

In Africa, in cases in which the preconditions were not right, the MTEF was introduced prematurely and turned out to be largely a paper exercise, partly because it failed to recognize the essentially gritty and political nature of the budget bargaining process, which cannot be reduced to a technocratic exercise.³⁰ For countries whose detailed MTEFs have failed, a simplification process should be encouraged.³¹

Strengthening Budget Execution and Reporting

In the short term, countries with low capacity should focus on “getting the basics right”—relatively simple reforms of the kind summarized in Box 5.³² The emphasis should be on building capacity in budget execution and

²⁹In one of the more successful African MTEFs, that of Uganda, the authorities spent five years establishing a stable MTEF before gradually starting to develop projections for individual sectors. Other countries, such as Rwanda and Tanzania, spent a few years testing the new approach in a few ministries before applying the MTEF to the whole budget. See also case studies of Malawi, South Africa, and Uganda in Simwaka (2007), Fölscher and Cole (2007), and Kuteesa and others (2007).

³⁰Where MTEFs with full activity-based budgeting systems have been introduced, for example, in Ghana and Malawi, these have generated large volumes of detailed information in which the main objective of the MTEF, namely, linking policy to budgetary allocations and introducing reliable forward estimates, has been lost.

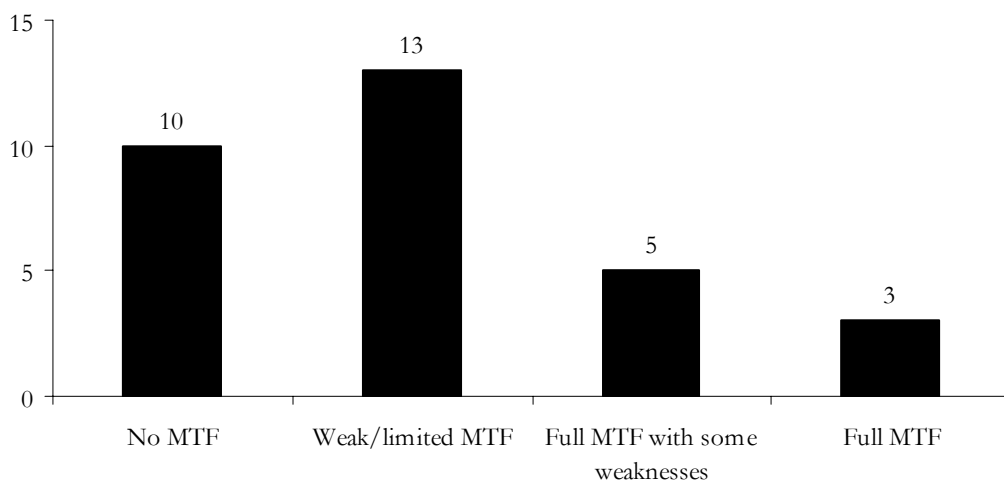
³¹For example, governments could pilot major new spending initiatives before moving to full-scale implementation and develop expenditure tracking surveys. To help channel funds into the most cost-effective interventions, governments could assess the costs and benefits of new programs on a pilot basis, if possible using randomized trials. If such assessments strain the capacity of low-income countries, donors, nongovernmental organizations, and academics (for example, MIT’s Poverty Action Lab) could be approached to carry out these evaluations. Finally, governments should develop expenditure tracking surveys to assess and improve the administrative efficiency of service delivery structures. Such surveys have been used successfully to identify and reduce expenditure leakages in Uganda and other countries (Reinikka and Svensson, 2006).

³²See Schick (1998), Allen and Tommasi (2001), and Diamond (2006) for more details.

Box 4. Current Medium-Term Fiscal Planning Practices

Most low-income countries do not have a medium-term framework (MTF) in place, and even where an MTF exists, it is often not well integrated with the budget and not used for analytical purposes. Out of 31 low-income countries examined,¹ only 3 had a full-fledged macrofiscal framework in place, 5 had a relatively comprehensive framework, 13 had a basic framework, and 10 had no MTF (see figure below). Only 10 of the 21 low-income countries that had an MTF systematically aligned their yearly budgets with these frameworks. In addition, (1) medium-term fiscal projections and macroeconomic assumptions were often unrealistic and therefore lacked credibility;² (2) the underlying macroeconomic assumptions for forecasts were often not explicit, with Reports on the Observance of Standards and Codes Fiscal Transparency Module suggesting that 9 out of the 21 low-income countries with an MTF did not explicitly state key macroeconomic assumptions; (3) the fiscal effects of different macroeconomic scenarios were often not quantified; (4) on occasion, long-term policy scenarios were not prepared; and (5) medium-term expenditure estimates often did not reflect expenditure priorities or changing priorities and were not adjusted in a rolling fashion.

Medium -Term Framework (MTF) Rating by Category
(Number of countries in each category)



Source: IMF, fiscal ROSC reports for 31 countries in Africa, Asia, Europe, and Latin America.

¹Based on information collected from the fiscal module of the Report on the Observation of Standards and Codes (ROSC). The country sample includes Albania, Armenia, Azerbaijan, Bangladesh, Benin, Burkina Faso, Cameroon, El Salvador, Equatorial Guinea, Georgia, Ghana, Guatemala, Guyana, Honduras, India, the Kyrgyz Republic, Malawi, Mali, Mauritania, Moldova, Mongolia, Mozambique, Nicaragua, Pakistan, Papua New Guinea, Rwanda, Samoa, Sri Lanka, Tanzania, Uganda, and Zambia.

²Some low-income countries even invite spending agencies to draw up their own macroeconomic assumptions to determine expenditure levels for the annual budget, which are not in line with the budget document.

Box 5. Short-Term Priorities for Public Financial Management Reform

The following short-term priorities should be considered for public financial management system reform:

- Ensure that the ministry of finance or central budget authority has adequate control over the fiscal aggregates and that budgetary spending is in line with the approved budget.
- Ensure that the process of preparing the annual budget is comprehensive and coherent, follows a sensible timetable, and is adequately integrated with the priorities-setting process of the national plan or Poverty Reduction Strategy Paper.
- Establish a budget classification, for administrative and economic categories initially, that complies with international good practice.
- Introduce a basic accounting system, with some level of automation, to process receipt and payment transactions, record information, and produce timely fiscal reports reconciled with banking data, at least for the main aggregates.
- Take steps to ensure reasonable cash flow planning and control of spending at key points of the spending chain and at the commitment stage.
- Establish a simple system for recording donor aid commitments and disbursements and tracking poverty-reducing expenditures.
- Ensure that staff manuals on budget preparation and expenditure authorization procedures are in place.

reporting. This will help countries avoid both ad hoc decision making on the allocation of budgetary resources and frequently encountered problems, such as expenditure arrears and low-quality and untimely fiscal reports. This will also facilitate efficient and effective use of resources and better tracking of poverty-reducing expenditures.

The maintenance of an adequate and coherent accounting framework is essential for tracking spending, enforcing accountability, and meeting donors' fiduciary requirements. At a minimum, a functioning accounting system should include (1) regular bank account reconciliation with accounting records; (2) double-entry accounting procedures, with both general ledger and supporting subsidiary ledgers; (3) a chart of accounts that facilitates reporting according to the budget presentation; (4) periodic and timely in-year consolidation of accounts, where accounting is decentralized; (5) maintenance of adequate accounting records; and (6) preparation of appropriate manuals and training for accounting staff (Box 5). Accounting information should be comparable across years and between the approved budget and data on realized expenditures. Any changes in the accounting basis and principles should be clearly specified and necessary adjustments made to ensure that the data are consistent.

Government banking arrangements need strengthening to improve cash management and accounting and to reduce fiduciary risk. A consolidated banking arrangement—ideally in the form of a treasury single account—also improves the quality of accounting data through effective and timely bank reconciliation. Care should be taken during scaling up to ensure that the number of bank accounts does not proliferate and further overload the low capacity of systems in low-income countries to keep track of the increased volume of transactions passing through the banking system. Over time, donors' bank accounts should be integrated with the treasury's accounts to avoid problems with cash management, and their respective accounting and banking records should be reconciled in a timely manner.

Regular and timely fiscal reporting is necessary to assure donors, policymakers, legislators, and other stakeholders that the government is on track in implementing its annual budget. In countries where subnational governments account for a significant portion of government spending, fiscal reporting should cover these entities also. Where capacity constraints limit the coverage of fiscal reports, the main requirement should be for timely and reliable reporting of the central government budget. Although many countries have some form of monthly reporting, the coverage and quality of such reports continue to be weak. To ensure that these fiscal reports and statements are complete, donors should provide full information to the authorities on their planned and actual aid disbursements, whether in cash, in-kind, or by direct disbursement to suppliers, particularly when these are not reported through the treasury.³³

A sound system of internal control is necessary to provide reasonable assurance that public expenditure is executed in accordance with the approved budget and the established regulatory framework. The effectiveness of budget execution does not necessarily increase by adding multiple layers of redundant control.³⁴ What is required is that the control function or task be clearly articulated and assigned, understood by controllers, and consistently applied to all transactions.³⁵ Given that payroll expenditure forms a substantial part of public expenditure in many low-

³³Donors could also encourage recipient countries to participate in the General Data Dissemination System (GDDS) and finance a scheme for data improvement developed under the GDDS.

³⁴This is the case in some Francophone African countries that exhibit characteristics (for example, emergence of arrears) of a poorly functioning control system in spite of multiple controls being applied at various stages of the expenditure chain. The IMF Fiscal Affairs Department's technical assistance advice, in such cases, has been to simplify and rationalize the complex structure of control.

³⁵All expenditure transactions need not pass through the same control/verification process, and a case could be made for a differential treatment of high-value and risk-prone transactions versus low-value transactions. The design of such a control system would depend on several factors, including the effectiveness of an ex post internal audit system to identify irregular transactions.

income countries, improving payroll management and control should also be given priority.³⁶

Weak or inadequate public procurement systems are one of the main sources of corruption. Strengthening procurement is essential to maintain donor confidence in continued funding through the budget and is one of the key measures identified in the 2005 Paris Declaration. Developing standard bidding documents, streamlining and computerizing the system for recording bids and contract awards, publishing such information in the official gazette, and, later in the process, developing an e-procurement system are some of the steps countries can take to strengthen public procurement. Recent efforts, spearheaded by the World Bank,³⁷ have resulted in a significant number of low-income countries enacting new procurement legislation and establishing procurement regulatory authorities. Although useful progress has been made, much capacity building remains to be done.

Integrating Donor Aid in the Budget Process

Aid disbursed through extrabudgetary channels should be coordinated with budget priorities. According to a recent survey, on average, only 37 percent of external aid is channeled through country PFM systems (OECD, 2006b). This complicates fiscal management. For example, the “3 by 5 Initiative”³⁸ mobilized substantial extrabudgetary resources to expand the number of HIV/AIDS patients receiving antiretroviral drug treatment from 400,000 in 2003 to about 2 million in 2006 (WHO, 2007), and the U.S. President’s Emergency Program for AIDS Relief has a provision for US\$15 billion over five years (beginning in 2004) largely for nongovernmental organizations, with spending increased in line with local implementation capacity. Donor preferences for specific programs affect the composition of health spending, although these programs are targeted to diseases that have high mortality.³⁹ In addition, earmarking of aid could introduce inefficiencies in expenditure

³⁶Ghana is a good example of a low-income country that has made encouraging progress in strengthening its personnel and payroll system. It adopted a new computerized Integrated Payroll and Personnel Database in 2006 and is finalizing the integration of these data into the budget.

³⁷World Bank policy is to build sufficient capacity in countries so that loans can be channeled through their national procurement systems rather than being ring-fenced as donor operations. Diagnostic analysis of these systems, and measures recommended to bring them in line with international good practice, are provided through the World Bank’s CPAR.

³⁸In 2003, the World Health Organization (WHO) and Joint United Nations Programme on HIV/AIDS (UNAIDS) launched the “3 by 5 Initiative” to treat 3 million people living with HIV/AIDS by 2005.

³⁹The share of donor support for certain infectious diseases doubled during 1999–2004 compared with 1990–98, while allocations for basic health remained broadly unchanged during the same period (OECD, 2006a).

allocations as noted earlier, straining the capacity of already weak PFM systems, reducing the flexibility of governments to reallocate resources in response to changing conditions and priorities, and hampering the implementation of expenditure smoothing.⁴⁰ Extrabudgetary flows hinder comprehensive budget planning and could lead to duplication and waste in the absence of a well-functioning coordinating mechanism. However, extrabudgetary aid and expenditure might be warranted in the short term in fragile and postconflict states, where resources cannot be channeled through institutions in an efficient and effective manner.

Strengthening PFM Systems, Including Their Capacity to Track Poverty-Reducing Spending

The emphasis should be on building capacity in budget execution and reporting to ensure efficient and effective use of resources. This capacity includes budget classification, accounting, public procurement, payroll management, and internal control systems. Such reforms will help countries avoid ad hoc decision making on the allocation of budgetary resources and frequently encountered problems, such as expenditure arrears and low-quality and untimely fiscal reports. Efforts to strengthen PFM systems, promote greater transparency, improve budget procedures and reporting, and prepare MTFs should also reassure donors that aid will be used effectively and encourage them to channel more aid through the budget.

Special attention needs to be paid to tracking poverty-reducing public spending to ensure that it reaches the intended recipients (Box 6).⁴¹ The key PFM areas identified above are critical to achieving desired expenditure allocations. Techniques such as the use of Public Expenditure Tracking Surveys (PETSS) and audit reports can help identify persistent weaknesses in the expenditure chain by estimating the amount of public funds that actually reaches frontline service delivery units through the budget system.⁴² These

⁴⁰Earmarking aid for specific uses preferred by individual donors has not been uncommon, and comes in different guises, such as providing direct financing for specific projects or tying aid to purchases from vendors in the donor country. For the latter, the United Nations (2005) recently estimated that it reduces the value of aid by 11 to 30 percent. Although official donors and civil society organizations have reaffirmed their intention to reduce earmarking to increase aid effectiveness by aligning aid better with country strategies, it is widely recognized that progress in this area has been limited (OECD, 2005). Going forward, a significant portion of scaled-up aid might continue to be earmarked for specific purposes. An example is the new International Drug Purchase Facility, which raises funds that are earmarked for drug purchases, financed by a levy on air travel.

⁴¹Countries typically define “poverty-reducing” expenditure in their PRSPs. This implies that some variation in the definition is likely across countries. However, most countries regard spending on basic health, primary education, agriculture, infrastructure, housing, basic sanitation, and HIV/AIDS as poverty-reducing expenditures.

⁴²It is not possible to track all types of spending in this way, such as certain large-scale infrastructure spending.

Box 6. Illustrative Expenditure Tracking Mechanism

The essential component of an effective mechanism for tracking poverty-reducing expenditures is a budget classification system that conforms with the international standard:

- At a minimum, a basic economic and administrative classification of expenditure should be put in place. This would allow administrative units to be “aggregated” into sectors that allow poverty-reducing expenditures to be tracked at a broad level;
- A functional classification of expenditures would provide a better indication of the allocation of expenditures within a sector or subsector, and hence allow improved tracking against the government’s poverty-reducing priorities; and
- A simple program classification would provide additional information for more detailed policy analysis and evaluation of aid effectiveness.

In addition, for aid that is delivered directly by donors outside the budget, donors should provide timely reports to government on disbursements:

- At a minimum, such reports should include information on aggregate disbursements by sector (aligned with government definition) and geographical location;
- If possible, data should be provided on expenditures according to their economic classification. The most basic requirement would be a distinction between recurrent and capital expenditures, which would allow the government to plan for the medium term adequately; and
- Eventually, donors should report against the functional or program classification of expenditures adopted by the government.

techniques can be helpful in assessing the quality of cash management and internal control systems, can focus attention on the need for reform in these areas, and, eventually, can strengthen mechanisms of internal and external audit. Uganda initiated a PETS to assess potential leakage of funds following a dramatic increase in primary education spending that failed to boost enrollments. The survey found that 87 percent of the nonwage resources were diverted to other uses (World Bank, 2004). Several lessons emerge from similar tracking surveys in Ghana, Honduras, Madagascar, Mozambique, Papua New Guinea, Rwanda, Senegal, Tanzania, and Zambia. In particular, poor resource management can result from excessive discretion in budgetary procedures in an environment with weak internal controls, imperfect information, and vested interests.

All poverty-reducing spending should be monitored because of fungibility in resource use. If resources are fungible, then a recipient country can offset the scaled-up aid that is intended for additional poverty-reducing programs by

lowering its own spending in those areas.⁴³ This problem is compounded by the difficulty of determining a counterfactual, that is, what a government would have spent on poverty reduction in the absence of higher aid flows. Moreover, substantial earmarking of resources for certain poverty programs by vertical funds would require their sustained support to ensure that these programs are maintained over time.

A gradual move toward a results-oriented budget would help strengthen accountability and help assess the effectiveness of different programs. Advanced forms of results-oriented budgeting are not appropriate for low-income countries. Still, some initial steps in this direction can be useful, such as identifying key program objectives and associated “responsibility centers,” defining the intended program outputs, strengthening the link between performance and rewards/sanctions, and implementing pilots in performance evaluation and results-oriented budgeting in selected ministries, such as health and education, where much donor aid has been focused. Burkina Faso, Ethiopia, Ghana, and Mali are examples of low-income countries that have made progress in implementing program and performance budgeting.

Formulating and Implementing PFM Action Plans

Low-income countries should prepare an action plan for strengthening PFM systems based on a comprehensive diagnostic study such as the PEFA framework. Reforms should be sequenced in line with government capacity, for example, by following a properly defined “platform approach” so that core building blocks precede more advanced reforms. The platform approach entails identifying indicators of success for each stage of the overall reform process to determine when to move on to the next stage (Table 1). This approach strengthens the linkage between the functional components of the reform.⁴⁴ The action plan may also need to be tailored to the unique circumstances of postconflict countries, which usually face weak legal and regulatory frameworks (for example, tax and budget laws), an ill-defined

⁴³Feyzioglu, Swaroop, and Zhu (1998) have shown that earmarked project aid to developing countries is largely fungible.

⁴⁴The platform approach—described in Brooke (2003)—has been used to help avoid initiating specific reforms for which the preconditions for success are not yet in place. For example, the implementation of a government financial management information system has often been undermined by an exclusive focus on information technology systems without sufficient consideration of other functional components of the reform, such as the review and redesign of business processes, as needed, and the identification of user requirements. Similarly, MTEFs have often been established in low-income countries before essential preconditions are in place, thus undermining their purpose and effectiveness. The platform approach, however, has been applied in only two countries (Cambodia and Kenya) to date, and it is too early to evaluate its effectiveness.

fiscal authority (for example, the ministry of finance), and inappropriate PFM systems (Gupta and others, 2005).

Key requirements of a successful PFM reform program are as follows:

First, studies have demonstrated that political economy factors are important for the successful implementation of PFM reforms. This helps explain why such reforms are so difficult to achieve and often slow to implement.⁴⁵ Recent studies of PFM reforms in Ghana, Malawi, and Mozambique demonstrate that, although sound budgetary rules and procedures may be in place, they are frequently distorted by informal practices that determine the actual distribution of budgetary resources (DfID, 2007). The studies reveal that dysfunctions and distortions can occur at all stages of the budgetary cycle. They underscore that demand for better governance and greater accountability is a key driver of change in budgetary systems.⁴⁶

They also suggest that incremental reforms are more likely to be successful than “big-bang” approaches, especially those that seek to incorporate models of reform imported from other countries.

Second, PFM reforms need to be linked to the annual budget cycle. There are two main reasons for this: (1) budget offices are especially busy at certain points of the year and have little time to focus on new reform initiatives at such times; and (2) certain reforms, for example, a change in the timetable for budget preparation or the budget classification, can be introduced only at the beginning of a fiscal year. In some countries (for example, Tanzania), formal consideration of new reform initiatives has been institutionalized as part of the regular budget calendar and involves consultation with technical assistance providers and other stakeholders.

Third, the main constraints to reform should be identified early on, and means should be found to eliminate or reduce their impact. Such constraints may include the absence of a suitable legal framework, technical issues (for example, the absence of a good budget classification), institutional weaknesses (for example, rivalries among different ministries, agencies, or departments over managing the budget process), or political factors. It is

⁴⁵For example, the development of a new budget classification system is a basic building block for other reforms, such as an efficient accounting and reporting system, a treasury system, and a simple performance monitoring system. Such a system can take two to three years to implement, and another four to five years to computerize.

⁴⁶A recent study of budget reform in South Africa highlights the importance of political commitment, a simple framework and transparent norms, comprehensive implementation, convincing stakeholders of the importance of reform, strong leadership by a central agency, building capacity, and demonstrating quick wins (see Fölscher and Cole, 2007).

Table 1. Illustrative Platforms for Strengthening Budget Formulation in a Typical Low-Income Country

Platforms	Priority-Setting Process	Macroeconomic Forecasting Capacity	Planning Instruments and Budget Process	Capital and Recurrent Budgeting	Performance Budgeting	Budget Classification and Chart of Accounts	Donor Aid Coordination	Capacity of Government to Manage Scaled-Up Aid
Initial system	Top-down approach, dominated by presidency and MoP with MoF in a supporting role.	None.	NDP, PRSP, and annual budget—largely disconnected.	Dual budget system—MoP responsible for capital investment and MoF for recurrent expenditures.	None.	Basic system of administrative and economic classification, not compliant with GFSM 2001.	Donor aid flows uncoordinated and largely managed outside the budget.	Low
First platform: basic system (1–2 years)	As in initial system but improved coordination within government and with donors.	Small unit in MoP.	Simple MTEF. Improved coordination among NDP, PRSP, and annual budget.	As in the initial system.	Rudimentary classification introduced for pilot sectors.	Economic classification compliant with GFSM 2001.	Better coordination through government/donor group, but aid largely executed outside the budget.	Low
Second platform: intermediate system (3–5 years)	Top-down but with involvement of key sector ministries and a stronger role for MoF.	Small units in MoP and MoF.	MTBF in place. Estimates incorporated in budget—NDP focuses on longer-term priorities.	Integrated budget managed by MoF but some role for MoP.	Rudimentary performance information for pilot sectors.	Functional classification compliant with GFSM 2001. Basic program classification.	Strong donor coordination; most aid flows executed by the treasury.	Medium
Third platform: final system (6–10 years)	Mixed top-down and bottom-up. Prominent role for MoF. Some decentralized decision making to sectors.	Strengthened unit in MoF.	Functioning MTEF and MTEF in place.	Integrated budget managed by MoF.	Introduction of program budgeting linked to MTEF.	Classification fully compatible with international good practice.	Donor aid estimates incorporated in MTEF and budget; aid flows executed by the treasury.	High

Source: IMF staff.

Note: GFSM 2001 = *Government Finance Statistics Manual 2001*; MTBF = medium-term budget framework; MTEF = medium-term expenditure framework; MTEF = medium-term fiscal framework; MoF = ministry of finance, MoP = ministry of planning; NDP = National Development Plan; PRSP = Poverty Reduction Strategy Paper.

often useful to include an analysis of constraints within the terms of reference of diagnostic studies or technical assistance missions, and to discuss methods of dealing with them with the recipient government.⁴⁷

Fourth, mechanisms should be put in place to promote effective leadership and coordination of the reform program among the authorities, donors, and other stakeholders. Some countries have established formal mechanisms for coordination, such as the donor partnership developed in Mozambique. Key roles and responsibilities of donors are indicated in Box 7.

The action plan for *short-term* measures should

- Focus on key PFM areas for aid utilization. These include the capacity to prepare sectoral ceilings and estimates based on improved functional and budget classifications and strengthened internal controls on budget execution, accounting, and reporting at the central level.
- Decompose reforms into a core set of functional components. Where appropriate, PFM reforms should be broken down into functional blocks, such as the core design elements, required changes to legislation, information technology procedures, and training. Monitoring progress in each area is essential so that problems can be addressed before they become obstacles to the overall reform process.
- Take initial steps to give the budget a results orientation. This would allow the governments to get a sense of whether scaled-up spending is having the desired effect on economic and social outcomes.

In addition, the action plan should recognize *medium-term reforms* where an early start is needed but change will occur more gradually, such as the following:

- Developing capacity in treasury systems, cash management, and debt management to strengthen budget execution and help countries build their own MTDS.
- Strengthening the capacity of subnational governments: As noted earlier, delivery of services such as education, health, and sanitation is increasingly being delegated to subnational governments, whose PFM systems are typically weaker than those of the national government. Effective use of aid for such services would require strengthening PFM systems at the subnational level as well.

⁴⁷This approach could build on interesting work done by Hausmann, Rodrik, and Velasco (2006) in relation to alleviating the most binding constraints on economic growth.

- Linking PFM reforms to broader public sector reforms: The reforms of PFM systems can be strengthened if they are part of a broader public sector reform of the civil service, governance and transparency, and the legal framework.
- Gradually increase the role and capacity of accountability institutions, such as the national audit authority, whose mandate should include undertaking value-for-money audits of key expenditure programs.

The Role of Technical Assistance in Supporting the Reform Process

The international community should support implementation of the action plan through technical assistance that targets the priority areas noted in Box 6. Recent evaluations of that provided by the IMF and World Bank have highlighted common problems in reform programs supported by donor technical assistance. These problems include inadequate diagnostic assessments, overloaded reform agendas, improper sequencing of reforms, political-economy constraints, poorly selected experts and inadequate quality control of their work, and insufficient coordination among the different providers of the assistance.⁴⁸ In some cases, there have been significant deficiencies and gaps in the design and implementation of the programs.⁴⁹ In addition, technical assistance recommendations require sustained follow-up by donors to monitor progress on achieving short- and medium-term goals.

Action is required on several fronts to address these concerns. First, effective measurement systems for monitoring both delivery of technical assistance and improvements in PFM systems need to be established. Tools such as the PEFA framework can be useful in this regard. Although there are some current concerns about the quality of the diagnostic assessments carried out under the PEFA framework, this initiative should be encouraged.

Second, effective coordination between technical assistance providers and the authorities is critical to the success of PFM reforms. There are often numerous donors providing such assistance in low-income countries, underscoring the need for effective coordination. The country authorities should ultimately be responsible for coordinating donor activities, but limited capacity or scarce human resources can require that a major donor assume

⁴⁸IMF (2004, 2005d, and 2006b); and World Bank (2005).

⁴⁹One recent evaluation study found that some recommendations were not sufficiently detailed in regard to strengthening the budget office (Chad), reviewing the budgetary process (Madagascar), developing analytical tools for reviewing the budget (Niger), and elaborating a macroeconomic framework for budgetary projections (Côte d'Ivoire and Senegal). See IMF (2006b).

Box 7. Role of Donors in Promoting Effective Public
Financial Management Reform

- Donors should encourage the national authorities to establish institutional arrangements that facilitate effective communication between the ministry of finance, the ministry of planning, and other agencies (for example, the prime minister's office) involved in the process of planning and disbursing official aid.
- Donors should play their part in producing realistic projections of donor disbursements of aid. Although project aid often suffers most from unrealistic projections, IMF-supported programs in low-income countries are often affected by late disbursements of general budget support by the multilateral donors.
- Donors should resist earmarking aid for specific purposes. Donors often give less attention to the budget priorities of the recipient country, and instead disburse money on their own schedule for projects they conceive to be useful. In other cases, national producers are rewarded by tying aid to national products and services.
- Donors should ensure that full information is provided on actual aid disbursements, whether in cash, in-kind, or by direct reimbursement to suppliers, and to the extent possible, attempt to satisfy their national authorities' requests for such information by using the recipient countries' own reporting and accounting system.
- Donors should ensure that, once funds are disbursed, the accounting and banking records of donors' own bank accounts are reconciled in a timely manner. Ideally, donor accounts should be integrated with the government's treasury system.
- Donors can do much to encourage transparency, participation, and accountability in public budgeting by supporting meaningful and regular reporting, timely disclosure of financial information, and external oversight of the budget process. They need to be more aware of the political economy factors that influence the behavior of partner governments, including the potential impact of their own behavior on domestic processes.

this role. One promising initiative in this field is the enhanced collaboration between the IMF and the World Bank to support PFM reform in a group of African countries—including Burkina Faso, Ghana, Malawi, Mozambique, Rwanda, and Tanzania—using a range of lending instruments and technical assistance operations.⁵⁰

Third, the IMF is playing an important role in supporting countries as they develop and implement medium-term action plans for PFM reform, in

⁵⁰IMF support for PFM reform is primarily through the PRGF program and technical assistance (for example, placing resident PFM advisers in the ministry of finance). Key World Bank instruments include its development policy lending and investment lending operations, as well as related economic and sector work such as public expenditure reviews.

collaboration with other development partners. The IMF has expertise in many of the areas that are critical to support the short-term capacity-building effort in low-income countries—for example, budget classification, accounting, internal control, and fiscal reporting. Such assistance should emphasize country ownership of the reforms; apply lessons learned to use technical assistance more effectively; make effective use of external finance and partnership arrangements with the World Bank and other technical assistance providers, where appropriate; and leverage the resources of staff from headquarters and the Regional Technical Assistance Centers. Good progress has been made: about 60 percent of the 78 PRGF-eligible countries either have a PFM reform plan in place or are in the process of preparing such a plan. The IMF has provided technical support in more than half of these countries.

Conclusions

Sound fiscal policies are critical for handling aid volatility as well as for making effective use of scaled-up aid and other flows. By easing resource constraints, these flows allow low-income countries to increase spending aimed at enhancing growth and reducing poverty. Effective management of these policies, however, presents a host of macroeconomic challenges, many of them fiscal.

Expenditure plans financed by scaled-up aid flows should take a medium-term perspective. The decision on how much to spend should be based on country-specific circumstances, including macroeconomic stability, absorptive capacity constraints, and debt sustainability. These plans should be consistent with available financing from all sources—public and private. Given the volatility and uncertainty of aid flows, one key objective should be to smooth the expenditure path so that all programs undertaken are adequately funded.

The overall fiscal balance, including grants, should be used to monitor short-term fiscal developments. Using this fiscal target would allow full spending of external grants while preventing the buildup of an unsustainable debt burden. It would be useful to complement this measure with other fiscal indicators.

Casting the spending path in a medium-term context obviates the need for a ceiling on wage spending. Although they have been designed as a short-term fix to address macroeconomic imbalances, wage bill ceilings have tended to persist. Going forward, such ceilings in IMF-supported programs should be used selectively, that is, only when they are warranted by macroeconomic considerations; justified in program documents; sufficiently flexible to accommodate spending of scaled-up aid; and reassessed at the time of program reviews.

Effective use of aid flows may require that some of the aid be saved temporarily. Limited absorptive capacity—macroeconomic, sectoral, and administrative—may constrain countries' ability to use aid effectively in the short run. Saving part of the aid flows to finance higher expenditure in the future, when capacity constraints are less severe, may be an appropriate response for some low-income countries.

Closely monitoring spending is important for ensuring debt sustainability. Achieving the Millennium Development Goals will require both more spending and more efficient spending. Inefficient spending will add to debt burdens without significantly improving economic and social outcomes. Good governance and the quality of fiscal institutions have a strong positive correlation with the efficiency of spending. Strengthening fiscal institutions would help in this regard.

Strengthening domestic revenue mobilization should be an integral part of the fiscal policy response to scaled-up aid. Higher revenues are essential to avoiding long-term reliance on aid and maintaining fiscal sustainability. In most cases, this can best be achieved by broadening the revenue base by eliminating exemptions and improving revenue administration. Other elements of the exit strategy are strengthening debt management capacity and fiscal institutions.

Countries have several policy choices to counteract aid volatility. They can sustain spending by drawing down saved-up aid when the aid inflows fall short of expectations. They can also take steps to protect poverty-reducing spending from cutbacks, including by building elements of flexibility into spending programs. Multiyear aid commitments by donors would help reduce aid volatility.

Improving the efficiency of spending in low-income countries will require further strengthening of fiscal institutions, including public financial management (PFM) systems. By promoting transparency and enhancing governance, more effective PFM systems reduce waste and misappropriation of funds. Strengthened PFM systems also reduce the transaction costs of meeting donor requirements for recipient countries, while donors are assured that their funds are being used for the intended purposes. These systems help countries track public spending, thereby shifting spending programs toward priority areas.

Countries should develop appropriately sequenced reform plans for strengthening their PFM systems. Such action plans should be based on a comprehensive diagnostic study of existing systems and should be consistent with local capacity to undertake such reforms. In the short run, action plans should focus on improving the budget classification system and strengthening internal controls on budget execution, accounting, and reporting. Developing the capacity to prepare sectoral ceilings and estimates should also be a short-term priority. Medium-term reforms include strengthening treasury systems, debt management, and PFM systems in subnational governments; linking PFM reforms to broader public sector and governance reforms; and strengthening key accountability institutions such as national audit offices.

Most low-income countries will require substantial technical assistance, including from the IMF, to strengthen their PFM systems. Given the IMF's limited resources and specialized expertise in core areas, coordinating with other donors is essential to avoid wasteful overlap and mixed messages. The IMF should appropriately leverage staff resources and explore financing and partnership arrangements with the World Bank and other providers.

1 Country Experiences with Scaled-Up Aid

In the past, aid recipients often experienced sharp swings in aid flows. Net aid flows to Pakistan, for example, increased by a factor of 2.5 between 1997 and 2004, and nearly tripled to Ethiopia during the same period.⁵¹ Analyzing country experiences around such aid spurts can be useful, both for understanding the transmission mechanism of scaled-up aid to various fiscal variables and for drawing lessons regarding appropriate institutional arrangements for facilitating aid management and absorption.

Some Statistical Properties of Aid Flows

Many low-income countries already receive more funds in the form of aid than they collect in the form of own revenues (Appendix Table A1.1).⁵² This is particularly true for African countries, which account for almost 60 percent of the sample. African countries received, on average, 16 percent of GDP in aid flows, substantially more than the Latin American or Asian countries in the sample. In contrast, the average revenue-to-GDP ratio in African countries was less than 10 percent. Breaking down the sample into five-year intervals shows that aid levels, expressed as a share of GDP, have declined in many countries.

Also, at least for Africa, aid flows have remained substantially more volatile than revenues (Table A1.1). Although the absolute volatility of both aid and revenues has declined, aid flows remain more volatile than revenues, a finding that is similar to the findings of other researchers.⁵³ Volatility of aid is

⁵¹See Mattina (2006) for a detailed discussion.

⁵²The analysis presented here is based on panel data from 51 PRGF-eligible countries during 1990–2004. Data on aid flows are taken from the OECD’s Development Assistance Committee (DAC) database, which captures the majority of (but not all) aid flows to the sample countries. The rest of the information is obtained from the IMF’s World Economic Outlook (WEO) and Monitoring of Fund Arrangements (MONA) databases.

⁵³Bulíř and Hamann (2006) find that the average volatility of a country’s aid share in GDP is about 40 times higher than that of its revenue share in GDP.

Table A1.1. Aid and Revenue, 1990–2004
(Means and medians are in percent of GDP)

	Number	Revenue/GDP			Aid/GDP			Relative Variance ¹
		Mean	Median	Standard deviation	Mean	Median	Standard deviation	
Full sample	51	12.2	10.7	4.7	13.8	11.6	5.2	1.2*
Africa	30	9.4	8.2	4.7	16.0	13.0	5.9	1.6**
East Africa	11	7.4	6.8	5.6	19.3	16.8	7.9	2.0**
Latin America	7	18.7	21.2	6.5	9.4	7.5	4.6	0.5
Asia	9	13.0	12.9	3.2	8.2	6.6	2.7	0.7
Pacific Islands	5	18.2	19.1	5.1	16.5	14.6	6.5	1.6

Sources: OECD, Development Assistance Committee (DAC) database; and IMF, World Economic Outlook database and staff estimates.

¹Ratio of variances between the aid and revenue variables, as in Bulíř and Hamann (2006).

* and ** denote significance at 5 and 10 percent levels, respectively.

higher in African countries than for the sample as a whole, reflecting the quantitative importance of aid (both grants and loans). Conversely, relative aid volatility, which is measured as a ratio of the variances of aid and revenues, has worsened in recent years. Volatility of aid has contributed to additional fiscal uncertainties in aid recipient countries.

Among the main components of aid, grants are much more volatile than loans (Table A1.2). The fairly large standard deviation around the mean for grants underscores that spending financed by external grants faces larger uncertainty than spending financed by loans. Statistically, this simply reflects the fact that grants are usually substantially larger than loans, but for actual fiscal management, *absolute* volatility is more relevant than *relative* volatility (that is, a normalized measure of volatility such as the coefficient of variation).

Past aid surges have been relatively short-lived. Achieving the Millennium Development Goals (MDGs) would require countries to manage and execute ambitious social and infrastructure projects that often have long gestation periods. Aid inflows for financing such projects would have to be much smoother and more sustained in the coming years than what appears to have been the norm in the past.

Table A1.2. Total Aid, Loans, and Grants
(Means are in percent of GDP)

	1990–94		1995–99		2000–04	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Full Sample						
Total aid	16.9	4.1	12.6	3.6	11.9	3.2
Loans	3.9	2.6	2.7	2.2	2.0	1.7
Grants	12.9	3.3	9.9	2.6	9.9	2.9
Africa						
Total aid	19.5	4.6	14.3	4.0	14.2	3.9
Loans	4.8	2.6	3.1	2.7	2.4	2.0
Grants	14.7	3.1	11.3	2.7	11.8	3.6

Sources: OECD, DAC database; and IMF staff estimates.

Aid Flows, Government Spending, and Fiscal Institutions

In general, aid flows have remained difficult to predict while past aid surges have been short-lived. A set of panel regressions of aid shows that only revenues and lagged values of aid consistently explain aid flows, and even then with relatively weak explanatory power (Table A1.3).⁵⁴ The negative relationship between aid and revenues conforms to the findings of other researchers (for example, Gupta and others, 2004). There is also some indication that aid flows rise with growth and behave countercyclically with respect to the output gap and revenues (that is, as the output gap widens and revenues increase, aid flows decline). For the most part, however, and despite trying out a wide range of explanatory variables, regression residuals remained large. The significantly smaller-than-unity coefficient of the lagged dependent variable suggests that aid is mean reverting, meaning a large aid spurt seldom persists. Various event studies carried out to probe deeper into the issue of aid flow volatility confirm that large increases in aid have consistently been followed by a tapering off of aid (Figure A1.1).⁵⁵

⁵⁴The regressions use a fairly large number of explanatory variables, including economic growth, outcome gaps, commodity prices, political risk, revenues, and past values of aid. To test for robustness, the regressions were run in various permutations, using levels and changes of the variables, and with different estimation techniques. Some of the selected regression results are presented in Table A1.3.

⁵⁵Aid spurts were defined as periods when a country's aid flows were notably higher than its average aid flows (by 0.75, 1, or 1.5 standard deviation), and then the average aid flows before and after these events were plotted.

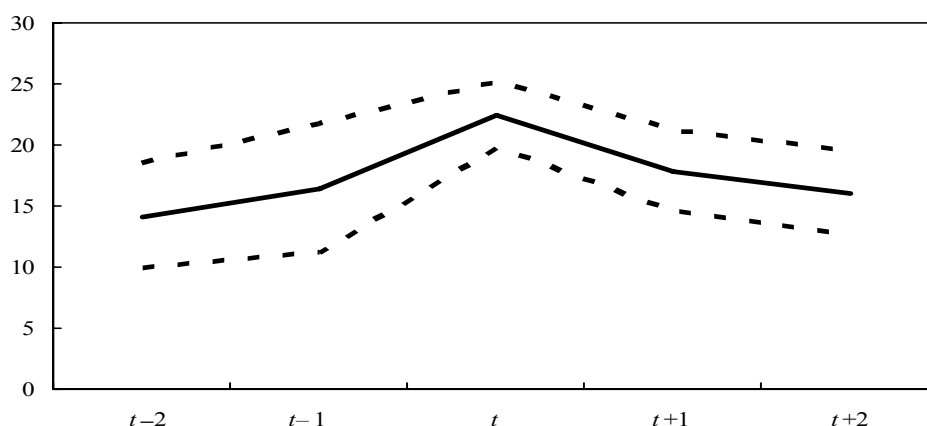
Table A1.3. Selected Regression Results

	Dependent Variable													
	Total aid/GDP	Revenue (minus grants)/GDP		Capital spending/GDP				Current spending/GDP				Education spending/GDP		Health spending/GDP
Total aid/GDP				0.44**	0.43**	0.58**	0.43**	0.03	0.06**					
				(0.06)	(0.07)	(0.16)	(0.14)	(0.03)	(0.01)					
Total aid/GDP squared				-0.01**	-0.01**	-0.01	-0.01	-0.01	-0.01**					
				(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)					
Lagged total aid/GDP	0.53**													
	(0.04)													
Revenue (minus grants)/GDP	-0.42**													
	(0.04)													
Loans/GDP		0.16*	0.13	0.36**	0.05	1.04**	0.35	0.04	0.02					
		(0.08)	(0.08)	(0.09)	(0.11)	(0.22)	(0.21)	(0.02)	(0.01)					
Lagged loans/GDP			0.18*											
			(0.08)											
Grants/GDP		-0.92**	-0.91**	0.23**	0.21**	0.25**	0.24**	0.01	0.03**					
		(0.04)	(0.07)	(0.03)	(0.03)	(0.07)	(0.05)	(0.01)	(0.01)					
Lagged grants/GDP			-0.06											
			(0.07)											
Political risk	0.05	0.14**	0.14**	-0.01	0.08	-0.21*	-0.17*	0.09**	0.09**	0.03**	0.04**			
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.09)	(0.08)	(0.01)	(0.01)	(0.01)	(0.01)			
Output gap	0.09	0.05	0.04	0.02	0.02	0.08*	0.08*	0.05	0.05	0.12	0.12	0.01	0.01	0.01
	(0.05)	(0.05)	(0.05)	(0.03)	(0.03)	(0.04)	(0.04)	(0.09)	(0.09)	(0.07)	(0.07)	(0.01)	(0.01)	(0.01)
IMF-supported program	0.43	-1.13	-1.20	0.54	0.86	0.84	1.53	-5.26**	-4.94**	-0.67	-0.41	-0.05	-0.01	-0.06
	(0.80)	(0.79)	(0.78)	(0.55)	(0.57)	(0.79)	(0.85)	(1.55)	(1.49)	(1.59)	(1.61)	(0.26)	(0.26)	(0.11)
High inflation	4.58*	3.47	3.35									-0.74	-0.80	-0.50*
	(1.87)	(1.82)	(1.81)									(0.50)	(0.50)	(0.22)
Africa	-2.29	-9.00**	-9.24**									-1.34*	-1.33*	-0.53*
	(1.78)	(1.72)	(1.70)									(0.58)	(0.58)	(0.25)
Latin America/Caribbean	-2.86	-9.91**	-10.18**									-0.53	-0.58	0.58*
	(2.00)	(1.93)	(1.92)									(0.66)	(0.66)	(0.28)
Asia	-4.45*	-10.68**	-11.02**									-2.41**	-2.51**	-0.45
	(1.90)	(1.85)	(1.84)									(0.64)	(0.64)	(0.27)
Growth	0.11*													
	(0.05)													
Observations	315	315	315	126	126	87	87	126	126	87	87	248	248	247
Number of countries	28	28	28	30	30	20	20	30	30	20	20	26	26	26

Source: IMF staff estimates.

Note: Standard errors in brackets, * significant at 5 percent; ** significant at 1 percent. Generalized least squares regression results are reported. Most results were robust under ordinary least squares regression specifications as well.

Figure A1.1. Event Study: Aid Flows After an Aid Spurt
(In percent of GDP)



Sources: OECD, Development Assistance Committee (DAC) database; and IMF staff estimates.
Note: t denotes years, and the dotted lines denote 1 standard deviation error bands.

Own revenues are correlated positively with loans and negatively with grants.⁵⁶ The contemporaneous correlation findings do not necessarily imply that grants induce reduced tax effort; rather, the finding could well be associated with the fact that donors give more grants to less-developed, fiscally constrained countries. This argument is also advanced in a recent paper by Morrissey (2006). Adding an indicator of political risk as an explanatory variable yields positive and statistically significant coefficients, indicating that countries with better political institutions and lower risk tend to be associated with higher revenue collection.

The impact of aid on spending was analyzed with four regressions that use different spending aggregates as the dependent variable (Table A1.3). The main results follow:

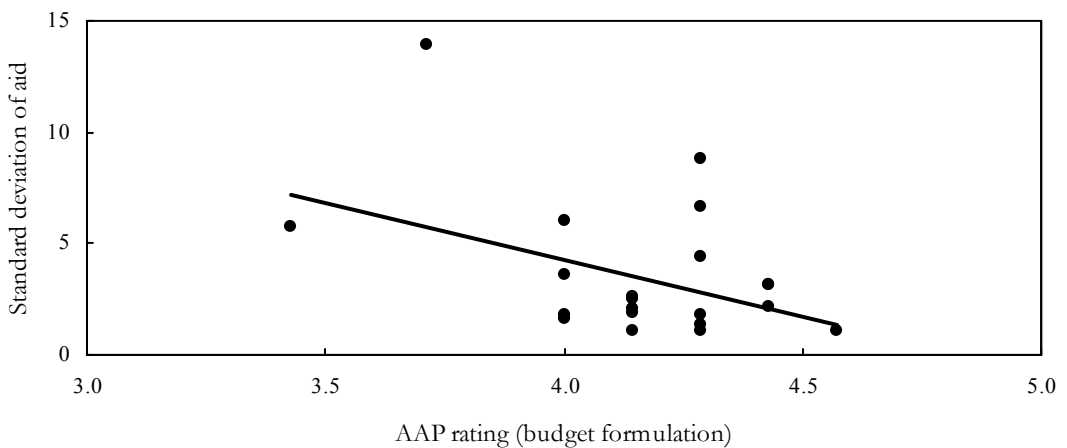
- Capital spending rises with total aid, although the result is more robust with increases in grants as opposed to loans. However, capital spending does not increase proportionately with more aid, as shown by a negative but small coefficient in the squared aid-to-GDP term.

⁵⁶Only selected regression results are reported. The initial set of regressions was run with data from the 51-country sample for the period 1990–2004. Adding the political risk variable in the specification significantly reduces the number of observations. The core results discussed in this section, however, hold across both the larger and smaller samples. Overall, the results are strong and survive a battery of controls and robustness tests.

- Current spending also increases with grants and, overall, tends to rise with aid flows by more than capital spending does.
- Social spending (that is, health and education) is fairly unaffected by aid flows. Health spending is positively correlated with grants (but not with loans), although the parameter is very small. There is no statistically significant effect of different aid aggregates on education spending. In general, countries with better political risk ratings are also associated with higher levels of health and education spending. The lack of responsiveness of health and education spending to aid flows may reflect government attempts to maintain such spending even when funding is volatile and uncertain. Indeed, countries use various mechanisms to protect certain spending items in these sectors from allocation shortfalls.

Although data on the quality of fiscal institutions are scarce, countries with better fiscal institutions would also seem to experience less aid volatility (Figure A1.2). Scatter plots of the standard deviations of aid flows with total HIPC-AAP (Heavily Indebted Poor Countries Assessments and Action Plans) scores—or any of the components (that is, budget formulation, execution, and reporting)—suggest that a higher institutional quality score goes hand in hand with lower aid volatility. Similar results hold when the HIPC-AAP scores are replaced by the fiscal portion of the World Bank Country Policy and Institutional Assessment (CPIA) ratings for a larger group of countries.

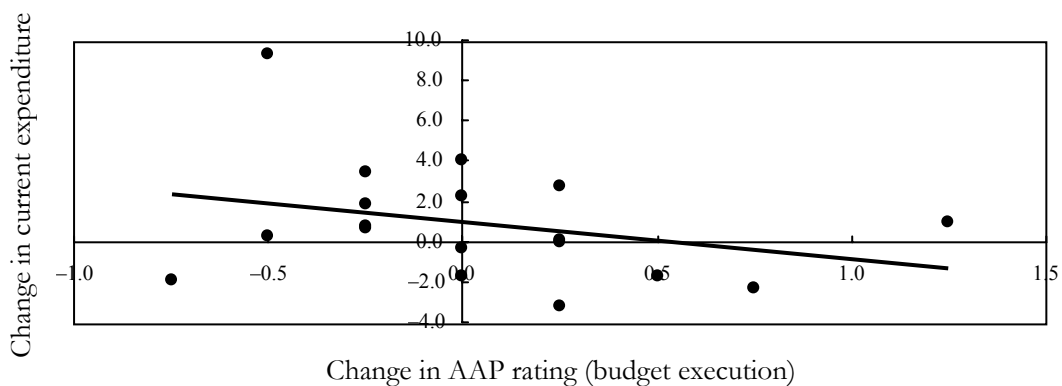
Figure A1.2. Aid Volatility and Fiscal Institutional Quality



Sources: IMF country documents and staff estimates.

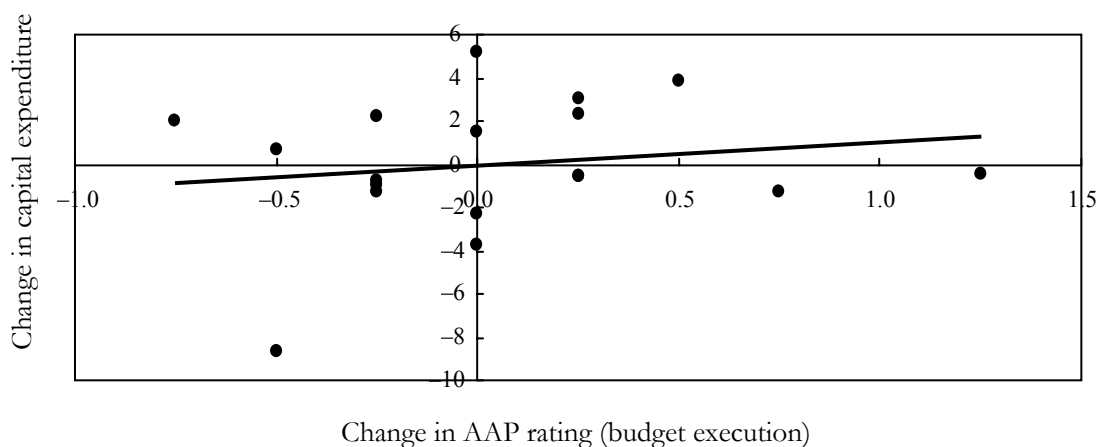
Note: AAP = Assessments and Action Plans.

Figure A1.3. Changes in Current Spending and Institutional Quality



Sources: IMF country documents, PEFA secretariat, and IMF staff estimates.

Figure A1.4. Changes in Capital Spending and Institutional Quality



Sources: IMF country documents, PEFA secretariat, and IMF staff estimates.

Countries that improved their ratings for budget execution also tended to reduce current spending while increasing capital spending (Figures A1.3 and A1.4). The two HIPC-AAP surveys, done a few years apart, allow analyzing the impact of *improvements* in fiscal institutions on budgetary activities. The data suggest that five out of seven countries with a deterioration in budget

execution ratings during 2001–04 increased current spending relative to GDP; similar results were found for other components of the HIPC-AAP scores. Conversely, countries that improved their budget execution ratings during 2001–04 also increased their capital spending, on average, although only slightly.

2 Expenditure Efficiency—An Empirical Assessment

It will be essential for low-income countries to make efficient use of scaled-up aid to ensure sustained progress toward the Millennium Development Goals (MDGs). In particular, efficient spending in priority areas—for example, health care, education, public investment—will be critical. This appendix describes how a sample of Poverty Reduction and Growth Facility (PRGF)-eligible countries have fared in transforming inputs into outcomes in health and education; this may help to shed light on current absorptive capacities and the likely efficiency of using scaled-up aid (Table A2.1). In addition, this appendix attempts to identify factors that may help explain differences in expenditure efficiency across countries.

Expenditure Efficiency in Health and Education in Low-Income Countries—The Scoreboard

Expenditure efficiency is assessed here by measuring how effective countries are in producing health and education outcomes. An implicit assumption is that spending affects outcomes and that a relatively more efficient country achieves the same outcome with lower spending. The analysis is done in two stages. In the first stage, the spending efficiency for each country in the sample is measured using Data Envelopment Analysis (DEA).⁵⁷ This methodology estimates the overall spending efficiency of the use of inputs (for example, health expenditure) to “produce” outputs (for example, health outcomes). The countries that provide the best combination (that is, the maximum outputs for a given level of inputs or, alternatively, the minimum inputs for the level of outputs) define the best-practice frontier. The

⁵⁷The DEA methodology derives from the literature on the estimation of production functions (for a detailed exposition of DEA and other methods of assessing efficiency, see Zhu, 2003). DEA has the advantage of being sparse in its assumptions about the characteristics of the production technology. This is particularly important for assessing spending efficiency, because little is known about the nature of the relationship between spending and outcomes.

Table A2.1. Countries Included in the Efficiency Analysis ¹

1	Angola	18	Ghana	35	Niger
2	Bangladesh	19	Guinea	36	Nigeria
3	Benin	20	Guinea-Bissau	37	Pakistan
4	Bolivia	21	Guyana	38	Papua New Guinea
5	Burkina Faso	22	Haiti	39	Rwanda
6	Burundi	23	Honduras	40	Senegal
7	Cambodia	24	India	41	Sierra Leone
8	Cameroon	25	Kenya	42	Sri Lanka
9	Central African Rep.	26	Lao People's Dem. Rep.	43	Sudan
10	Chad	27	Lesotho	44	Tanzania
11	Congo, Dem. Rep. of	28	Madagascar	45	Togo
12	Congo, Rep. of	29	Malawi	46	Uganda
13	Côte d'Ivoire	30	Mali	47	Vietnam
14	Djibouti	31	Mauritania	48	Yemen, Rep. of
15	Eritrea	32	Mozambique	49	Zambia
16	Ethiopia	33	Nepal	50	Zimbabwe
17	Gambia, The	34	Nicaragua		

¹This list includes countries that were PRGF-eligible in September 2006, excluding some small island economies and transition countries. The list also excludes PRGF-eligible countries without available data on health and education spending. Countries with missing information on outcome measures were dropped from the analysis of that outcome measure.

countries that are not on the frontier are then ranked according to the distance from the frontier, which is a measure of relative efficiency expressed as the efficiency score. The second stage attempts to identify key factors that account for differences in the relative efficiency scores, using correlation coefficients and multivariate truncated regressions that relate relative efficiency scores to various control variables. The inputs used in the analysis are per capita health and education spending⁵⁸ in purchasing power parity dollars, and the outcomes are indicators that are used to monitor progress toward the MDGs. Table A2.2 shows the different indicators used, their definitions, the corresponding MDGs, and the availability of data. Because of a relative paucity of data that directly measure outcomes, the analysis also uses intermediate indicators of outcomes, such as enrollment rates and the numbers of births attended by skilled staff.

⁵⁸Health spending includes both public and private spending. However, education spending data relate to public spending only, because private spending data are not available.

Table A2.2. Spending and Outcome Indicators for the Efficiency Analysis

Spending Indicators ¹	Indicators	Spending Years (period averages)	Indicator Years	Number of Countries	Type of Indicator	MDG ²
Education						
Public education expenditure ³ (in PPP dollars)	Literacy rate, youth (percent of people ages 15–24)	1999–2002 ⁴	2004	39	Outcome	MDG 2
	Primary school enrollment (percent net)	1999–2002 ⁴	Avg. 2000–04 ⁴	39	Output	MDG 2
	Persistence to grade 5 (percent of cohort)	1999–2002 ⁴	Avg. 2000–03 ⁴	33	Outcome	MDG 2
	Ratio of girls to boys in primary and secondary (percent)	1999–2002 ⁴	Avg. 2002–04 ⁴	54	Output	MDG 3
	Ratio of literate females to males (percent ages 15–24)	1999–2002 ⁴	2004	36	Outcome	MDG 3
	Trained teachers in primary education (percent of total)	1999–2002 ⁴	Avg. 2001–04 ⁴	32	Output	n/a
	Health					
Public health expenditure (in PPP dollars)	Immunization, measles (percent of children 12–23 mos.)	1998–2001	2004	78	Output	MDG 4
	Private health expenditure ⁵ (in PPP dollars)	Mortality rate, infant (per 1,000 live births)	1998–2001	2004	78	Outcome
Total health expenditure ⁵ (in PPP dollars)	Mortality rate, under-5 (per 1,000)	1998–2001	2004	78	Outcome	MDG 4
	Maternal mortality ratio (per 100,000 live births)	1998–2001	2000 ⁶	61	Outcome	MDG 5
	Births attended by skilled health staff (percent of total)	1998–2001	Latest 2000–04	57	Output	MDG 5
	Health worker density (per 1,000 people)	1998–2001	Latest 2000–03	39	Output	n/a

¹Spending variables have been corrected for differences in purchasing power. PPP = purchasing power parity.

²MDG 2 is “Achieve universal primary education,” MDG 3 is “Promote gender equality and empower women,” MDG 4 is “Reduce child mortality,” and MDG 5 is “Improve maternal health.”

³Data on private spending on education are not available.

⁴Years with available data.

⁵Available for broadly the same number of countries and the same years.

⁶World Bank model estimate.

First-stage results

First-stage results point to large variances in spending efficiency, implying that higher levels of spending do not always translate into better outcomes. More specifically—

- Countries with the lowest per capita incomes tend to have the lowest efficiency scores for health (Table A2.3). This general conclusion holds broadly, irrespective of the outcome indicator used or whether total health spending or only public health spending is considered.⁵⁹ Three outcome indicators—infant mortality, child mortality, and maternal mortality—were used in the analysis. Overall, only about 40 percent of the countries in the poorest half of the sample ranked in the top half with respect to their outcome efficiency scores.⁶⁰
- Relative efficiency analysis for education spending yields comparable results (Table A2.4). The two indicators used for this exercise are the primary enrollment rate and youth literacy rate. Only one-third of the poorest countries in the sample are ranked in the top half of efficient countries on the basis of the primary enrollment rate. The results are more favorable for youth literacy rates, with as many as 64 percent of the poorest countries in the top half based on efficiency scores.

Second-stage results

The second-stage analysis is limited, because of data constraints, to efficiency of health spending. The control variables used in this stage are listed in Table A2.5. Second-stage results point to several factors that may help to explain differences in spending efficiency in the sample:

- Governance and the quality of fiscal institutions have a strong positive correlation with efficiency in health. Several indicators of governance and institutions were used in the analysis, such as the International Country Performance Rating (ICPR), the average Country Policy and

⁵⁹Taking into account both private and public health spending is important for assessing health outcomes. Some countries with low public health spending have relatively better health outcomes. It would be reasonable to assume that this could reflect higher private spending; however, no direct relationship was found between the share of private spending in health and relative efficiency scores.

⁶⁰The first-stage efficiency scores computed with the three health outcome indicators are strongly correlated, indicating that the results are robust.

Table A2.3. Percent of Countries in Top Half of the Efficiency Distributions for Health by Income Level ¹

Annual GDP Per Capita ²	Health Outcome Indicators		
	Infant mortality	Child mortality	Maternal mortality
≤ 1,457	40.0	40.0	37.5
> 1,457	60.0	60.0	62.5

Sources: World Bank, World Development Indicators database; and IMF staff estimates.

¹Countries in the first two quartiles of the efficiency distribution have better efficiency scores than the median country.

²In PPP U.S. dollars. The median per capita income in the sample is \$1,457 in PPP terms.

Table A2.4. Percent of Countries in Top Half of the Efficiency Distribution for Education by Income Level ¹

Annual GDP Per Capita ²	Education Outcome Indicators	
	Primary school enrollment	Youth literacy
≤ 1,457	33.3	64.3
> 1,457	66.7	35.7

Sources: World Bank, World Development Indicators database; and IMF staff estimates.

¹Countries in the first two quartiles of the efficiency distribution have better efficiency scores than the median country.

²In PPP U.S. dollars. The median per capita income in the sample is \$1,457 in PPP terms.

Institutional Assessment (CPIA) score, and some of the latter's components for the quality of fiscal institutions. Table A2.6 presents those correlation coefficients between the relative efficiency scores and the control variables that are robust.⁶¹ Thus, on average, countries with better governance and fiscal institutions achieve higher health outcomes at lower levels of spending.⁶²

- The level of aid and aid volatility are not correlated with health efficiency scores.⁶³ This is because aid volatility does not translate into similar changes in health spending (see Appendix 1) or health

⁶¹A control variable is considered correlated with the health efficiency scores when the correlation coefficient of that variable is statistically significant at the 10 percent level or higher and with the expected sign. To be considered robustly correlated, the relationship has to hold for at least three out of five efficiency score indicators.

⁶²The sample size does not allow computing correlation coefficients for education with sufficient confidence.

⁶³However, Herrera and Pang (2005) find that countries with high ratios of aid to fiscal revenues tend to score lower on efficiency.

Table A2.5. Control Variables

Group	Factors
Income and human development	GDP (in PPP dollars per capita) Prevalence of HIV Adult literacy rate Infant mortality rate
Conflict	Country at war anytime between 1995 and 2005 Military expenditure (percent of GDP)
Infrastructure	Improved sanitation facilities access (percent of population) Improved water source access (percent of population) Urban population (percent of total)
Level and volatility of aid ¹	Total ODA received Technical cooperation aid Development food aid Emergency aid Other aid Total loans (net) Grants
Governance and fiscal institutions	ICPR: Governance rating CPIA 12: Property Rights and Rule-Based Governance CPIA 13: Quality of Budget and Financial Management CPIA 15: Quality of Public Administration CPIA 16: Transparency, Accountability, and Corruption Control CPIA 12–16: Average

Note: CPIA = Country Policy and Institutional Assessment; ODA = official development assistance; ICPR = International Development Agency Country Performance Rating; PPP = purchasing power parity.

¹The level of aid received is measured as aid received as a percent of GDP for each type of aid. Volatility of aid received is measured in three ways: standard deviation of aid, coefficient of variation of aid, and the relative variance of aid to revenue.

outcomes. In other words, short-term changes in aid do not affect the relationship between spending and outcomes in the health sector, and therefore do not affect spending efficiency.

- The efficiency of health sector spending is correlated positively with outcomes in the education sector and with infrastructure, and

negatively with the prevalence of HIV/AIDS. Higher adult literacy rates and improved access to sanitation are associated with higher efficiency of health spending (Table A1.6). These results reflect the importance of adequate sanitation infrastructure to health outcomes and the well-known fact that better education and health outcomes reinforce each other: better education leads to better decisions on health-related matters, and improved child health promotes investment in education (Miguel and Kremer, 2004). The prevalence of HIV/AIDS in a country lowers the relative expenditure efficiency in the health sector.

Multivariate truncated regressions confirm these findings.⁶⁴ Efficiency scores for infant mortality were regressed on the prevalence of HIV, adult literacy rate, access to sanitation services, and the average CPIA scores for fiscal institutions. The coefficients for all variables are significant and of the expected sign (Table A2.7). It is worth noting that the coefficient for the CPIA indicator is significant in each of the three alternative specifications.

This analysis of the efficiency of education and health spending should be interpreted with some caution. Health and education outcomes are influenced by a host of factors beyond spending that can only be partially captured by the use of controls in the second stage of the analysis. In addition, the methodology focuses on quantifiable inputs and outcomes, and only partially takes into account harder-to-measure factors such as quality. Finally, efficiency is measured in relative terms, implying that if a country is on the frontier, it is relatively more efficient than other countries in the sample. In relatively small samples, such as for this analysis, this may result in some bias in the result. Nevertheless, the thrust of the findings presented here is consistent with those reported in the literature on expenditure efficiency.⁶⁵

⁶⁴The number of control variables that could be included was limited by the number of observations available.

⁶⁵For example, Baldacci and others (forthcoming) find that increased public spending has a lower effect on outcomes when the quality of spending and the governance and institutional arrangements are weak. A paper by the IMF's Policy Development and Review Department (IMF and World Bank, 2004) states that improved country policies, institutions, and public expenditure management in low-income countries are important for aid to be more effective. Estache, Gonzalez, and Trujillo (2007) find that low-income countries have lower expenditure efficiency in achieving health and education outcomes than do lower-middle-income, upper-middle-income, and high-income countries. Finally, Gupta and Verhoeven (2001) find that efficiency of education spending is lower in African countries than in Asian and Western Hemisphere countries.

Table A2.6. Correlation Matrix of Relative Efficiency Scores and Control Variables ¹

Control Variables	Relative Efficiency Scores									
	Immunization, measles		Infant mortality		Child mortality		Maternal mortality		Births attended by skilled health staff	
	Coefficient	N	Coefficient	N	Coefficient	N	Coefficient	N	Coefficient	N
Prevalence of HIV			0.30**	44	0.29*	44	0.39**	43		
Adult literacy rate			-0.35**	36	-0.43**	36	-0.28*	36	-0.31*	35
Improved sanitation facilities			-0.25*	50	-0.26*	50			-0.43**	46
ICPR: Governance rating	-0.40**	50	-0.30**	50	-0.26*	50				
CPIA 12: Property Rights and Rule-Based Governance	-0.33**	50	-0.30**	50	-0.29*	50				
CPIA 15: Quality of Public Administration	-0.40**	50	-0.33**	50	-0.31**	50				
CPIA 16: Transparency, Accountability, and Corruption Control	-0.29**	50	-0.24*	50					-0.27*	46
CPIA fiscal indicators average	-0.40**	50	-0.31**	50	-0.25*	50				

Sources: World Bank; and IMF staff estimates.

¹A negative sign means that more of the control variable is negatively correlated with the efficiency score and hence positively correlated with level of efficiency. * and ** denote significance at the 10 and 5 percent levels, respectively.

Table A2.7. Truncated Regressions of Expenditure Efficiency Scores ¹

	Specification 1	Specification 2	Specification 3
Prevalence of HIV	0.008* (0.108)	0.002** (0.022)	0.001* (0.051)
CPIA fiscal indicators average	-0.018** (0.026)	-0.018** (0.027)	-0.012* (0.096)
Adult literacy rate		-0.001** (0.014)	
Access to improved sanitation facilities			-0.001** (0.020)
Constant	1.106 (0.000)	1.139 (0.000)	1.109 (0.000)
Sigma ²	0.025	0.024	0.023
N	40	32	40

Sources: World Bank; and IMF staff estimates.

¹A negative sign means that more of the control variable is negatively correlated with the efficiency score and hence positively correlated with level of efficiency. * and ** denote significance at the 10 and 5 percent levels, respectively.

²Sigma is the standard error of the regression.

Fiscal Policy Implications for Scaled-Up Aid

The above analysis points to two important implications for expenditure policy in the context of scaled-up aid: (1) improving efficiency of spending in low-income countries is critical to achieving the MDGs; and (2) in most low-income countries, effective utilization of scaled-up aid will require a further strengthening of fiscal institutions. These reforms will contribute to enhancing the efficiency of spending in low-income countries.

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