



# Discussion Paper

## The Macroeconomic Management of Foreign Resource Inflows: Accelerating the Achievement of the MDGs

September 2010

United Nations Development Programme

POVERTY REDUCTION







# The Macroeconomic Management of Foreign Resource Inflows: Accelerating the Achievement of the MDGs

September 2010

.....  
**Pedro Martins**

## Abstract

This paper discusses resource flows to developing countries. The findings show that many countries had managed to attract an increasing volume of foreign resources. However, their global allocation remained uneven, with the majority of resources – even foreign aid – flowing to middle-income countries. The evidence indicates that volatility of foreign resources has increased in recent years, with the unpredictability of aid disbursements and the pro-cyclical nature of capital flows remaining a concern. These patterns are usually associated with damaging economic consequences, which undermine the positive impacts of foreign inflows. The paper proposes a pro-poor macroeconomic framework, which is better suited to deal with the macroeconomic challenges arising from large resource inflows.

### Disclaimer

The views expressed in this publication are those of the authors and do not necessarily represent those of the institutions to which they are affiliated, the United Nations, including UNDP, or Member States.

**Copyright © September 2010**  
**United Nations Development Programme**  
**Bureau for Development Policy**  
**Poverty Group**  
304 East 45th Street  
New York, NY, 11375  
U.S.A.  
E-mail: [poverty.reduction@undp.org](mailto:poverty.reduction@undp.org)  
Website: [www.undp.org/poverty](http://www.undp.org/poverty)

# 1 Introduction

Developing countries require additional resources to support economic growth rates that are compatible with the achievement of the Millennium Development Goals (MDGs). Foreign resource inflows – such as aid, remittances and direct investment – often serve the dual purpose of stimulating domestic economic activity and providing foreign exchange to balance external accounts. However, the overall economic and social impact of these inflows will depend, to a large extent, on how they are disbursed and the policy responses of recipient countries. This paper focuses on the macroeconomic management of foreign resource inflows and the implications for the achievement of the MDGs.<sup>1</sup>

After this brief introduction, section 2 surveys recent trends in foreign resource flows to developing countries. Although most inflows have increased in recent years, they have become more volatile and unpredictable. Moreover, resource inflows also appear to be positively correlated with the recipients' economic "cycle" (pro-cyclicality) – with the exception of remittances and humanitarian aid. In section 3, we evaluate the macroeconomic challenges of high and unstable foreign resource inflows. We group the challenges into two main policy areas – fiscal and macroeconomic – and assess the implications for economic growth and poverty reduction. Section 4 presents an analytical approach to investigate how policy coordination between governments and central banks can significantly minimise the adverse effects of large resource inflows. We then review the related empirical evidence. Finally, section 5 proposes a pro-poor macroeconomic framework and a set of concrete policy measures to promote the effective use of foreign resources. These recommendations are crucial to accelerate progress towards the MDGs. Section 6 synthesises the main arguments and concludes the paper.

## 2 Trends and Characteristics of Foreign Resources

### 2.1 Volume and Geographical Distribution

Foreign resources to developing countries have grown considerably since 2002 (TABLE 1). This growth has been mainly driven by direct investment (FDI), private debt (e.g., loans and bonds) and workers' remittances. Portfolio equity flows have registered a fast increase but are still comparatively small. The effects of the 2008 financial crisis are depicted by the sharp fall in private debt flows and the quick reversal in portfolio equity inflows. Estimates for 2009 suggest a further contraction of private credit, a resurgence of official loans, a recovery of portfolio equity flows, and a slowdown in FDI. However, these figures are substantially influenced by the inclusion of emerging economies such as China, the Russian Federation and Brazil. Most low-income countries (LICs) have limited access to international financial markets (e.g., commercial bank loans) and have fairly undeveloped stock markets. Hence, we will focus on official aid (grants and concessional loans), FDI and workers' remittances, which constitute the bulk of resource inflows to LICs.

---

1. A particular emphasis is placed on low-income countries.

**TABLE 1**  
**Foreign Resource Flows to Developing Countries (USD billion)**

	2001	2002	2003	2004	2005	2006	2007	2008	2009 <sup>e</sup>
Net private and official flows <sup>†</sup>	224.2	161.0	262.3	361.4	501.8	659.8	1,222.8	780.5	523.5
Net equity inflows	170.9	160.3	179.8	254.3	349.9	469.0	663.8	536.5	445.9
Net FDI inflows	164.6	151.3	154.3	215.7	281.1	363.2	528.4	593.6	358.3
Net portfolio equity inflows	6.3	9.0	25.5	38.6	68.8	105.8	135.4	-57.1	87.5
Net debt flows	53.3	0.7	82.5	107.1	151.9	190.8	559.0	244.0	77.6
Official Creditors (WB, IMF, ...)	27.3	6.2	-12.4	-26.2	-71.5	-72.3	-0.9	28.1	69.5
Private Creditors	26.0	-5.4	94.9	133.1	223.4	263.1	559.9	215.9	8.1
Change in reserves (- = increase)	-80.9	-168.7	-292.3	-398.5	-393.6	-643.5	-1,081.0	-439.0	-561.0
<i>Memorandum items</i>									
Official grants excluding TC	29.1	33.9	45.8	53.6	56.8	106.9	76.0	86.2	..
Workers' remittances	93.9	114.2	141.8	161.8	193.0	235.0	290.0	336.0	316.0

Obs.: † These figures do not include "current transfers" such as official grants and remittances; e Estimate.

Source: GEP (2010:7) and GDF (2010:1).

TABLE 2 demonstrates the importance of each major resource flow by income group and region. While aid inflows (ODA) as a share of GNI are significantly larger in low-income countries and sub-Saharan Africa, FDI inflows are proportionally similar across income groups and regions. The latter have increased as a share of GDP in most country groupings, although in sub-Saharan Africa these have usually been directed to oil-exporting countries. The fall in aid flows in the 1990s is usually associated with donor "aid fatigue" and the collapse of the Soviet Union, which eliminated the geo-political rationale for providing aid. Since then aid levels have remained relatively stable. Remittance flows have also grown significantly across most country groupings, and are now a very important resource to low-income countries.

In US dollar terms, however, resource inflows are still skewed towards middle-income countries (TABLE 8). Although sub-Saharan Africa has received around 40 percent of total ODA, the region only attracts 6 percent of total FDI and remittances. Moreover, low-income countries have only managed to attract 4 percent of total FDI and about 9 percent of total remittances. The share of resource inflows to these two country groupings has seen little variation in the last two decades.

Overall, these trends suggest that the poorest countries have managed to attract an increasing volume of foreign resources in the last decade. However, the (uneven) global allocation of resources remains unchanged.

**TABLE 2**  
**Foreign Resource Flows to Developing Countries (% of Income or Output)**

	1990-94	1995-99	2000-04	2005-08
<i>Aid (% GNI)</i>				
Low income	9.8	7.2	7.9	7.7
Middle income	0.8	0.5	0.4	0.4
East Asia & Pacific	1.1	0.6	0.4	0.2
Europe & Central Asia	0.3	0.4	0.5	0.2
Latin America & Caribbean	0.4	0.3	0.3	0.2
Middle East & North Africa	2.9	1.3	1.3	2.5
South Asia	1.7	0.9	0.8	0.8
Sub-Saharan Africa	6.4	4.8	5.0	5.0
<i>FDI (% GDP)</i>				
Low income	1.2	2.1	2.1	3.8
Middle income	1.3	2.6	2.6	3.3
East Asia & Pacific	3.0	3.8	2.7	3.4
Europe & Central Asia	0.7	1.7	2.4	4.3
Latin America & Caribbean	1.1	3.1	3.2	2.8
Middle East & North Africa	0.8	0.7	1.3	3.7
South Asia	0.2	0.7	0.9	2.2
Sub-Saharan Africa	0.7	2.0	2.8	3.1
<i>Remittances (% GDP)</i>				
Low income	3.0	3.3	4.8	6.4
Middle income	1.2	1.2	1.7	1.9
East Asia & Pacific	0.6	0.8	1.3	1.6
Europe & Central Asia	1.2	1.2	1.3	1.6
Latin America & Caribbean	0.7	0.8	1.6	1.8
Middle East & North Africa	7.3	4.0	3.9	4.1
South Asia	1.8	2.5	3.4	3.9
Sub-Saharan Africa	0.9	1.3	1.5	2.0

Source: Period averages calculated from the World Bank (2010).

## 2.2 Volatility, Predictability and Cyclicity

Recent research suggests that the specific characteristics of resource inflows can be quite important. In particular, it is argued that the volatility, unpredictability and pro-cyclicality of foreign inflows can have detrimental effects on the domestic economy.<sup>2</sup>

TABLE 3 investigates the volatility of resource inflows, as measured by the coefficient of variation – the ratio of the standard deviation to the mean value. Although there are no significant differences in volatility between low-income and middle-income countries, there is a marked contrast between resource inflows. For example, ODA appears to be less volatile than both FDI and remittances. Nonetheless, the volatility of ODA has been increasing over time, with the exception of the last few years for

2. *Volatility* refers to year-on-year variation; *predictability* relates to whether commitments (e.g., of aid or FDI) are good predictors of disbursements; and *cyclicity* evaluates the correlation with changes in domestic aggregates (e.g., growth).

LICs. FDI volatility has significantly increased in 2005-2008. There are also reasons to believe that the volatility of resource inflows may have increased during the recent global economic crisis, though there is limited data available for 2009.<sup>3</sup>

**TABLE 3**  
**Volatility of Foreign Resource Inflows (Coefficient of Variation, %)**

	1990-94	1995-99	2000-04	2005-08	1990-08
<i>ODA</i>					
Low income	4.7	11.5	27.1	18.4	36.6
Middle income	4.5	8.5	12.9	12.9	33.3
<i>FDI</i>					
Low income	45.9	17.2	15.5	51.8	99.4
Middle income	49.0	22.1	15.9	32.0	82.2
<i>Remittances</i>					
Low income	7.1	14.8	30.2	29.5	90.1
Middle income	21.0	11.7	27.4	22.1	76.9

Source: Calculated from the World Bank (2010).

These results are broadly in line with the findings from the literature on capital inflows – remittances are usually excluded. Osei et al. (2002) find that official flows are less volatile than private flows, and that FDI volatility is lower than other private flows. This is not surprising, since private flows (especially portfolio equity) tend to be more responsive to changes in the recipients' economic and political environment than official flows. Moreover, while the volatility of total capital flows (and that of their components) has increased in the 1990s (Gabriele et al., 2000), our results suggest that this trend has not been reversed in the 2000s. Furthermore, aid inflows tend to be significantly more volatile than the recipients' output (Pallage and Robe, 2001), domestic fiscal revenues (Bulir and Hamann, 2008) and export receipts (Kharas, 2008). These findings are particularly concerning, since aid volatility has continued to increase in the early 2000s (Hudson and Mosley, 2008).<sup>4</sup>

The predictability of resource inflows is also crucial, especially for ODA inflows. Celasun and Walliser (2008) find that the predictability of budget aid is "strikingly low," with disbursements deviating by about 30 percent of commitments. Bulir and Hamann (2008) and Pallage and Robe (2001) also conclude that aid commitments are poor predictors of disbursements, especially in lower-income countries. This is problematic since most LICs rely on ODA to finance a considerable share of public capital expenditures. The increasing unpredictability of aid will lead to delays in the implementation of development projects and/or increases in domestic financing (often at unfavourable terms) with serious implications to the sustainability of public debt.

Finally, we can also assess the business cycle properties of resource inflows. For example, Pallage and Robe (2001) show that aid flows are overwhelmingly pro-cyclical (with respect to domestic output) in African countries. This is also confirmed for its components (e.g., grants and technical assistance), but less clear for aid commitments. Bulir and Hamann (2008) also find that aid disbursements are pro-cyclical (on average). Finally, Pallage and Robe (2001) do not find evidence that aid disbursements are significantly correlated with the donors' business cycle, which has been a concern in the context of the recent economic and financial crisis.

In summary, there is evidence that the volatility of foreign resource inflows has increased in recent years. Moreover, the unpredictability of aid disbursements and the pro-cyclical nature of capital flows remain a concern. The likely consequences of these observed patterns will be addressed below.

3. The GEP (2010) only reports regional estimates for 2009 (not for low-income countries). Moreover, the OECD-DAC has only released preliminary ODA figures for DAC donors.

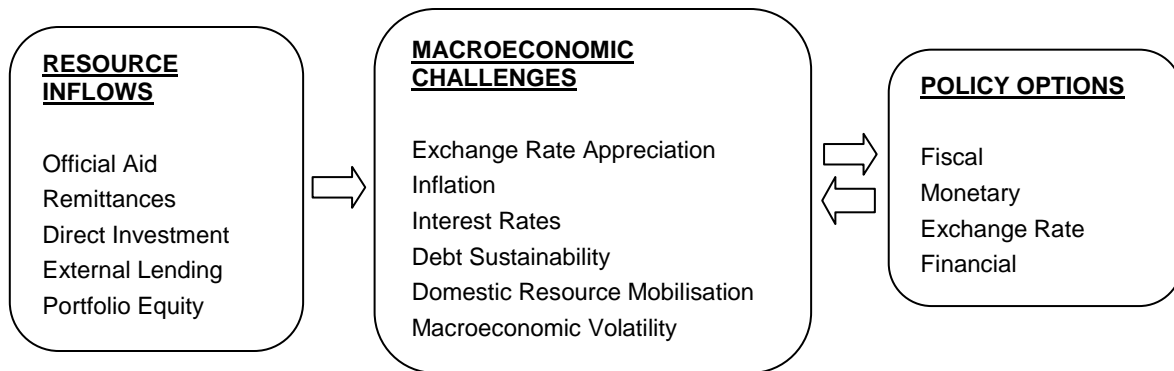
4. Moreover, Fielding and Mavrotas (2005) find that programme aid tends to be more volatile than project assistance. This result is intuitive, since budget support is often used as a policy conditionality tool – easier and more likely to be suspended.



### 3 Macroeconomic Challenges

The achievement of the MDGs will require faster and more equitable rates of economic growth. These rates can only be achieved by ensuring that foreign resources stimulate domestic investment, generate employment and reduce poverty. However, the effects of resource inflows on recipient economies are often complex and require some degree of management. Hence, we investigate the two main transmission channels through which they affect the domestic economy – the fiscal budget and the real exchange rate – in order to better understand the implications for economic growth and poverty reduction. Figure 1 summarises the key challenges affecting recipient economies.

**FIGURE 1**  
**Macroeconomic Challenges**



#### 3.1 Fiscal Impacts

Foreign aid inflows (ODA) have a significant impact on the fiscal budget, since these are directly disbursed to recipient governments. They are usually provided with the intention of financing new public expenditures, especially those related to economic infrastructure, social sectors (e.g., education and health) and production sectors (e.g., agriculture).<sup>5</sup>

However, a number of concerns have often been raised. Donors traditionally worry about the lack of *additionality*. This occurs when aid inflows do not entail an equivalent increase in public expenditure and are instead used for other purposes. This leads to concerns about *tax displacement*. It is usually argued that foreign aid is associated with a decline in domestic revenues, either because: (i) it lowers governments' incentives to increase the "tax effort," (ii) it is linked to policy reforms that lower revenue collection (e.g., trade liberalisation), or (iii) the additional fiscal space is used to lower tax rates for certain sectors of the economy. There are also concerns about *debt sustainability*. Since aid inflows may be associated with "aid illusion," (i.e., public expenditure increasing by more than the amount of the net aid inflow), they can contribute to an escalation of the debt burden. This will happen if aid interventions induce extra costs that need to be financed by domestic resources (e.g., road maintenance or staff salaries of a newly-built hospital), or if recipients overestimate future aid inflows. However, aid inflows may ease the debt burden if used to pay off onerous public loans. Finally, there are concerns about the *fungibility* of aid inflows. Aid is said to be fungible in situations where earmarked aid flows are indirectly used for unintended purposes – for example, if aid increases the recurrent budget rather than capital spending.

5. Humanitarian aid activities are often implemented by donor agencies, thus affecting the fiscal budget only indirectly.

The empirical evidence with regard to the fiscal impact of aid inflows is mixed. The lack of additionality can be justified by the time lag between aid being disbursed and the actual expenditure, which can be especially long for concessional loans and budget support grants – usually disbursed up-front in large instalments. Aid inflows do tend to increase recurrent spending, but it should be noted that some types of recurrent expenditure have a clear development focus and are strongly supported by donors (e.g., health staff salaries). Moreover, the relationship between aid and domestic revenues is difficult to disentangle. Several studies have found a negative relationship, suggesting that aid undermines domestic resource mobilisation and amplifies external dependence. However, other studies have found a positive relationship (Osei et al., 2005), which may result from aid activities aimed at improving tax collection systems or due to their impact on imports and growth. Since aid inflows provide foreign exchange that enable imports to be increased, these may indirectly raise the amount of international trade taxes. Moreover, by stimulating economic activity, aid can also contribute to larger domestic indirect tax receipts. A common finding in the literature is that foreign aid and domestic borrowing are close “substitutes,” which might be a consequence of unpredictable aid inflows. Although aid is indirectly financing expenditures, borrowing costs can be substantial when interest rates are high. However, the main conclusions arising from the literature is that the fiscal impacts of aid tend to be country specific, and that we ought to look at specific country dynamics.

Remittances can also have sizeable fiscal impacts. Migrant transfers to poor households may reduce the need for government safety nets. This may enable the reallocation of scarce resources to other expenditures, such as public investment. Furthermore, since remittances stimulate consumption expenditure, and therefore domestic demand, they may also contribute to higher tax collection.

The fiscal impact of FDI inflows may not be particularly significant, since countries often offer tax incentives and subsidies to attract foreign firms. However, if FDI inflows do contribute to stimulating the domestic economy, then they may have positive indirect effects on tax collection.

## 3.2 Macroeconomic Impacts (Real Exchange Rate)

Foreign resource inflows increase the availability of foreign currency in the recipient economy. Since the real exchange rate is a common measure of a country’s external competitiveness, it becomes crucial to assess how it responds to increased resource inflows.

It is usually argued that large capital inflows undermine economic growth through the appreciation of the real exchange rate (“Dutch disease”) and the consequent loss of export competitiveness. The argument is that large foreign inflows will increase the demand for domestically produced goods, therefore placing an upward pressure on prices. Since the prices of tradable goods are determined in international markets, an increase in the price of domestic inputs (e.g., services and labour) will squeeze the profits of the export sector and discourage the production of “tradable” goods. Moreover, higher wages in the non-tradable sector will encourage a relocation of labour at the expense of the tradable sector. These two effects will hamper the development of the export sector, thus undermining the country’s capacity to earn foreign exchange and jeopardising its external sustainability.

The choice of exchange rate regime will affect the mechanism through which the real exchange rate appreciation will take place, but not the final outcome – nominal appreciation in a “pure float” versus higher domestic inflation in a “fixed peg.”

Nonetheless, the impact of resource inflows on the composition of expenditure appears to be crucial to the overall effect. If these inflows are used to purchase capital goods from abroad, then they are not likely to have a significant impact on the real exchange rate. However, if these are significantly biased towards the purchase of (non-tradable) local goods, and if there are

significant supply-side constraints, then domestic inflation will increase and the real exchange rate appreciate. It can therefore be argued that remittances are more likely to be associated with appreciation pressures than other resource inflows, since these are usually biased towards the purchase of non-tradables. ODA and FDI inflows tend to stimulate the demand for capital imports.

Despite these theoretical predictions, the empirical evidence seldom supports the Dutch disease hypothesis. Although Rajan and Subramanian (2005) find that aid inflows induce a real exchange rate appreciation (but not remittances), Mongardini and Rayner (2009) argue that neither grants nor remittances are associated with appreciation pressures. In fact, several empirical studies even suggest that foreign aid leads to a depreciation of the domestic currency, possibly due to positive productivity effects or aid tied to imports (see Li and Rowe, 2007). The lack of robust empirical support for the Dutch disease hypothesis therefore suggests that there is underutilised supply capacity or that resource inflows have been used to ease supply-side constraints in the recipient economies.

### 3.3 Economic Growth and Poverty Reduction

Resource inflows have the potential to stimulate economic growth, reduce poverty and advance human development. However, the effectiveness of these flows will depend on the extent to which they increase investment (public and private), build up human capital, generate employment and expand opportunities for the poor.

Aid inflows contribute to economic growth mostly through their impact on public investment. In particular, the expansion of socio-economic infrastructure plays a major role in stimulating private investment (crowd-in) and in accelerating economic growth. Moreover, aid can affect poverty through channels other than growth (Lensink and White, 2000). Aid interventions targeted to the poor can further human development and significantly reduce poverty.

Hansen and Tarp (2000) argue that the empirical evidence overwhelmingly supports a positive relationship between aid and economic growth.<sup>6</sup> However, there are certain factors that can weaken the growth effect of aid. For example, the volatility of aid inflows can significantly reduce the impact of aid on growth (Lensink and Morrissey, 2000), while their unpredictability makes fiscal management a difficult task (Celasun and Walliser, 2008). Finally, pro-cyclical aid inflows will fail to act either as a stabilising force (i.e., smoothing fluctuations in aggregate income) or as an insurance mechanism (i.e., compensating for large negative income shocks such as terms of trade) (Bulir and Hamann, 2008). Hence, how aid is disbursed can reinforce already strong and costly macroeconomic fluctuations in recipient countries, hampering the impact of aid on developing countries' welfare and growth (Pallage and Robe, 2001 and Arellano et al, 2009).

The impact of remittance inflows on the domestic economy is mostly mediated by private consumption. Higher remittance inflows will raise the level of household expenditures, as well as contribute to consumption smoothing. Since remittances tend to be counter-cyclical, they will attenuate the impact of negative income shocks, such as droughts and economic downturns.

The impact of remittances on growth is a controversial subject. Although some studies suggest a negative impact (Barajas et al., 2009), this appears to illustrate the compensatory nature of remittances, rather than suggest a causal detrimental impact on growth. More importantly, there is evidence that remittances considerably reduce the level, depth, and severity of poverty in developing countries (Adams and Page, 2005). Policy measures that encourage remittance inflows may therefore

---

6. While some studies fail to find a robust association between aid and growth, Clemens et al. (2004) suggest that this is due to an aggregation bias: (i) humanitarian aid is negatively correlated with growth, (ii) aid inflows earmarked to education and health only impact growth over a long period of time; (iii) aid for infrastructure and production sectors (e.g., agriculture and industry) can quickly impact on economic growth.

significantly reduce the share of people living below the poverty line. Workers' remittances can also promote financial sector development. In particular, remittances appear to contribute to increasing the aggregate level of deposits and credit intermediated by the local banking sector (Aggarwal et al., 2006).<sup>7</sup> This is likely to be another mechanism through which remittances can have a positive impact on growth and poverty reduction. While remittances are perhaps not a significant "source of capital for economic development" (Chami et al., 2005), in the sense that they may not directly promote entrepreneurship and private investment, they still play an important role in raising the living standards of the population.

FDI inflows usually refer to an increase in (long-term) foreign ownership of domestic firms. The economic impacts of FDI inflows are often complex and difficult to untangle. The main channels through which these inflows may affect the domestic economy include the accumulation of capital and technology spillovers. The argument is that FDI inflows facilitate the transfer of knowledge and new technology, thereby improving economic productivity. Even those firms that are not directly affected by the capital inflow may still stand to benefit due to positive externalities. However, some studies warn against the use of excessive policy measures to attract FDI, since their socio-economic benefits might be overestimated.

Unfortunately, much of the current evidence is ambiguous. Lumbila (2005) argues that FDI has a positive impact on growth in Africa, and that human capital, infrastructure, and a stable macroeconomic environment enhance the impact of FDI on growth. However, there are doubts as to whether the direction of causality runs from higher FDI to stronger growth or the other way around. In fact, while FDI may contribute to faster economic growth (Hansen and Rand, 2006), growth itself appears to be an important determinant of FDI inflows (Chowdury and Mavrotas, 2006). Carkovic and Levine (2005) find that FDI does not have an independent positive impact on growth, but rather depends on other growth determinants such as sound economic policies. Moreover, Hermes and Lensink (2003) argue that a developed financial system is an important requirement for FDI to have a positive impact on economic growth. The implication is that low-income countries may stand to gain less from FDI inflows. Finally, Lensink and Morrissey (2006) do not find robust evidence of a positive effect of FDI on growth in developing countries, but argue that the volatility of FDI inflows has a negative impact on growth. Gabriele et al. (2000:1035) suggest that the increasing volatility, unpredictability and pro-cyclicality of capital flows may lead to macroeconomic instability, and contribute to the "emergence of financial crises and to systematic inappropriate selection in investment projects." The effect of FDI on poverty is likely to be even less clear.

Hence, while aid inflows are typically associated with faster economic growth and poverty reduction – mainly through their impact on public investment – workers' remittances are effective in reducing household income poverty. The lack of evidence linking remittances to economic growth is not particularly surprising, given the counter-cyclical nature of these inflows. Finally, foreign direct investment has the potential to stimulate economic growth, although it may depend on specific country circumstances.

## 4 Analytical Approach

The lack of policy coordination between governments and central banks can exacerbate the macroeconomic challenges mentioned above – e.g., inflationary pressures, exchange rate appreciation and accumulation of public debt. The "division" of domestic policy-making, often encouraged by central bank independence, may undermine the effective use of foreign resources. This section presents an analytical approach to assess the level of policy coordination in recipient countries.

---

7. Gupta et al. (2009:104) also provide evidence that remittances "have a direct poverty-mitigating effect, and promote financial development."

## 4.1 Absorbing and Spending Aid Flows

The IMF (2005) proposes an analytical framework to investigate whether developing countries have coordinated fiscal and macroeconomic responses to large aid inflows. At the heart of this approach are the following two interrelated concepts: (i) *spending*, which is defined as the widening of the non-aid fiscal deficit following an aid surge; and (ii) *absorption*, which is defined as the widening of the non-aid current account deficit due to the aid surge.

In practice, *spending* evaluates the extent to which governments use foreign aid to increase public expenditure and/or reduce taxes, while *absorption* assesses whether central banks make foreign exchange available to importers. If aid is not fully spent, then at least a share of the inflow is being “saved” (i.e., used to reduce domestic borrowing needs or pay off public debt). Similarly, if aid is not fully absorbed, then it is being used to build up international reserves at the central bank and/or finance capital outflows (see macroeconomic identities in appendix).

The ideal policy response to an aid surge is to *absorb and spend* (TABLE 4). The fiscal expansion stimulates aggregate demand, which in turn contributes to a higher demand for imports. Subsequently, the aid inflow finances the increase in net imports, as the extra foreign exchange becomes available to importers. This policy combination leads to the widening of both fiscal and current account deficits. However, some real exchange-rate appreciation may take place to enable the reallocation of domestic resources.

**TABLE 4**  
**Possible Policy Combinations in Response to a Scaling Up of Aid**

	Absorbed	Not Absorbed
Spent	<ul style="list-style-type: none"> <li>Government expenditure increases</li> <li>Central Bank sells the foreign exchange</li> <li>Fiscal and current account deficits widen</li> </ul> <i>Ideal scenario</i>	<ul style="list-style-type: none"> <li>Government expenditure increases</li> <li>Central Bank does not sell foreign exchange (international reserves are built up)</li> <li>Inflation increases (Dutch disease)</li> </ul>
Not Spent	<ul style="list-style-type: none"> <li>Government reduces borrowing (or debt stock)</li> <li>Central Bank sells the foreign exchange</li> <li>Monetary growth is slowed; nominal exchange rate appreciates; inflation is lowered.</li> </ul>	<ul style="list-style-type: none"> <li>Government reduces borrowing (or debt stock)</li> <li>Central Bank does not sell foreign exchange (international reserves are built up)</li> </ul> <i>Short-term stabilisation policy</i>

Source: Adapted from Gupta et al. (2006).

When aid is *absorbed but not spent*, the government uses the aid inflow to reduce its seigniorage requirement, since it substitutes for domestic deficit financing (Buffie et al., 2004). Moreover, the central bank sterilises the monetary impact of domestically financed fiscal deficits by selling foreign exchange (Gupta et al., 2006:11). This policy scenario usually leads to slower monetary growth and may help alleviate inflationary pressures. This could be an appropriate policy response in countries that have not achieved stabilisation – e.g., those facing high domestic deficits and high inflation – or have a large stock of domestic public debt. The argument is that a reduction in the level of outstanding public debt could “crowd in” the private sector (both investment and consumption) through its effect on interest rates (Hussain et al., 2009).

However, there are two caveats to this scenario. First, it is assumed that neither public spending is increased nor revenues lowered (through tax cuts), which means that aggregate demand remains unchanged. Nonetheless, a “balanced budget” approach – e.g., combination of higher spending and taxes that leaves the non-aid fiscal deficit unchanged – is compatible with this result and can have a significant impact on aggregate demand via the fiscal multiplier. Second, when debt levels

are relatively low, it becomes unclear whether the financial system will channel additional resources to the private sector (IMF, 2005:4). Moreover, the absence of monetary instruments in many low-income countries (e.g., secondary bond markets) may undermine sterilisation and foreign exchange operations.

A common but problematic response is when aid is *spent but not absorbed*.<sup>8</sup> This is similar to a fiscal stimulus in the absence of foreign aid. The increase in government spending must be financed by either: (i) monetising the fiscal expansion – printing domestic currency – which increases money supply and potentially inflation; or (ii) sterilising the monetary expansion – by issuing treasury bills – which could lead to higher interest rates and potentially crowd out the private sector (Hussain et al., 2009). In this case, there is no real resource transfer due to the absence of an increase in net imports. However, the net effect on the real exchange rate is uncertain, since higher (unmet) demand for net imports contributes to depreciation pressures (via the nominal exchange rate), while higher inflation works in the opposite way.

Finally, if foreign aid is *neither absorbed nor spent*, then the non-aid deficits are not increased. Once again, this could be a feasible short-run strategy if the government needs to retire onerous debts (or smooth volatile aid inflows) and foreign reserves are at a precariously low level (Gupta et al., 2006). In the absence of a fiscal expansion, aggregate demand is not affected (see previous caveat) and there are no pressures on the exchange rate or domestic prices. In the long-run, however, this may not be a politically viable strategy due to external and domestic demands.

This last and fourth approach can be easily extended to include non-concessional government loans. Moreover, while FDI inflows, remittances and even export proceeds generate similar challenges to the central bank, they raise a slightly different set of issues with regard to fiscal policy – e.g., whether or how to tax foreign investors and private transfers.

## 4.2 Empirical Evidence

The IMF (2005) examines the policy responses of five African countries that have recently experienced a surge in aid inflows: Ethiopia, Ghana, Mozambique, Tanzania, and Uganda. They evaluate absorption and spending by focusing on two discrete points in time: a pre-surge period and an aid-surge period. They conclude that most countries fail to significantly absorb and spend aid inflows, while spending is typically greater than absorption. Foster and Killick (2007) extend this exercise to two other countries, concluding that aid has been fully spent and partly absorbed in Mauritania, whereas in Sierra Leone it has been mostly absorbed and partly spent (TABLE 9).

However, this empirical approach has a few limitations. The estimates from the absorption and spending equations will be very sensitive to the point in time in which they are evaluated. Defining the pre-surge and the aid-surge period will be critical for the results and perhaps the policy conclusions. Moreover, this simple methodology ignores potential dynamic effects, since absorption and spending may well increase after the surge period – due to a very likely time lag. Finally, one needs to use these concepts with caution, since full “spending” can be achieved through a total displacement of domestic revenues, in which case aid flows cause a proportional decrease in domestic revenues with no increase in government expenditures. The concept does not distinguish between what would be a desired outcome (e.g., increased developmental expenditures), and a potentially perverse effect that increases aid dependency and threatens long-term fiscal sustainability.

Aiyar and Ruthbah (2008) and Martins (2010) have undertaken econometric exercises in order to further investigate these issues and resolve some of the limitations of previous exercises. Aiyar and Ruthbah (2008) provide results from a

---

8. The IMF (2005:4) argues that this is a “common but problematic response, often reflecting inadequate coordination of monetary and fiscal policies.”

Generalised Method of Moments (GMM) system estimator for a large sample of developing countries, as well as for African and aid-dependent country samples. The authors argue that, in the short-run, only a third of aid has been absorbed by recipient countries, although this value rises to about half in aid-dependent countries. Moreover, developing countries spend about half of the aid resources, but the value is about three-quarters in Africa. In the long-run, these values grow significantly, but absorption is still consistently lower than spending. They do not find evidence that aid inflows have a significant impact on reserve accumulation, which suggests that a significant share of aid is exiting through the capital account (capital flight). Finally, they find that aid has only a small impact on investment, even in the long-run.

Martins (2010) conducts a similar exercise for 25 low-income countries in Africa using the pooled mean group (PMG) estimator. The results suggest that, in the short-run, recipient countries have absorbed about two-thirds of the aid inflow. Moreover, around one-third of the foreign exchange provided by these inflows has been used to build up international reserves, perhaps to protect economies from future external shocks. In the long-run, absorption of foreign exchange appears to increase further without reaching its maximum (full absorption). In terms of aid spending, recipient countries appear to have fully spent the amount of aid. In particular, a substantial percentage of these inflows went to finance public investment expenditures (one-third in the short-run, rising up to two-thirds in the long-run). There is only weak evidence that some aid flows have been “saved” (i.e., used to substitute for domestic borrowing) or induced capital outflows.

Overall, both sets of econometric results suggest that policy coordination is not as weak as previously thought. In fact, it appears that countries have managed to reasonably coordinate their policy responses to aid inflows. Governments have significantly spent aid inflows, partly through a significant increase in public investment. Moreover, central banks have also significantly absorbed the aid inflows (albeit not fully). These findings may explain the lack of robust evidence supporting the Dutch disease hypothesis. Nonetheless, there is still room for improvement, which will be addressed in the next section.

## 5 An MDG-friendly Macroeconomic Framework

The attainment of the MDGs requires faster and more equitable economic growth rates. While this can be achieved with support from the international community, appropriate fiscal and macroeconomic policies can significantly contribute to improving the effectiveness of foreign resources. Moreover, the current economic climate also presents countries with the opportunity to redesign domestic policies and development strategies.

The purpose of this section is twofold. Firstly, it will present a pro-poor macroeconomic framework that can effectively contribute to the achievement of the MDGs. The general features will be briefly outlined with special consideration for fiscal and macroeconomic policies. Secondly, we will propose concrete policy measures to improve the effectiveness of resource inflows. These recommendations are influenced by the broad orientation of the pro-poor macroeconomic framework suggested.

### 5.1 Macroeconomic Policy Options

Macroeconomic policies should play a proactive role in stimulating economic growth. Excessive concerns with macroeconomic stability – e.g., maintaining small fiscal deficits, targeting low inflation rates and a commitment to a fully flexible exchange rate regime – will undermine, rather than increase, the chances of developing countries achieving the MDGs. A macroeconomic

framework centred on human development and sustainable economic growth should include the following components (Weeks and McKinley, 2007):<sup>9</sup>

(i) **Fiscal policy that takes the leading role in stimulating economic activity.** An expansionary fiscal policy stance has considerable potential to stimulate economic growth and reduce poverty.<sup>10</sup> Countries should therefore increase current levels of public investment with a view to improve economic infrastructure and create a healthier and skilled workforce. A stronger focus on public investment programmes will encourage private investment (“crowding-in”) and contribute to a more dynamic economy, capable of generating employment and raising the incomes of the poor. Moreover, countries should strengthen domestic revenue mobilisation in order to gradually reduce external dependence.

(ii) **Monetary policy that accommodates the fiscal stimulus.** Central banks should encourage domestic credit creation in order to stimulate private investment and accommodate the needs of a growing domestic economy. Moreover, targeting low real interest rates would further encourage private lending and alleviate the domestic public debt burden. It is important that central banks accommodate and support expansionary fiscal policies rather than focus excessively on macroeconomic stability, as this usually thwarts the effectiveness of fiscal policy.<sup>11</sup>

(iii) **Exchange rate management that actively supports fiscal and monetary policies.** Developing countries should maximise – rather than restrict – the availability of policy instruments. Hence, exchange rate policy should allow countries to manage the exposure to external risks, while maintaining a competitive exchange rate to promote exports. Where feasible, an intermediate (managed) exchange rate regime will contribute to a dynamic economy and avoid currency volatility, which is often harmful to economic growth. Nonetheless, the benefits of a depreciating exchange rate on export competitiveness need to be balanced against its impact on the external debt burden and inflation. Moreover, countries should also consider the management of the capital account as a tool to contain and manage capital outflows.

(iv) **Financial policy that focuses on promoting productive employment.** Domestic financial systems should be strengthened to enable a greater mobilisation of domestic savings, which can then be channelled to private investment. Governments should play a greater role in the financial sector, in particular due to their ability to create positive incentives and tackle market failures. For example, national investment banks could provide credit to small businesses and target productive employment-intensive sectors, which are typically neglected by (large) commercial banks.

**TABLE 5**  
**Macroeconomic Policy Options**

	Fiscal	Monetary & Financial	Exchange Rate
Policy Focus	<ul style="list-style-type: none"> <li>Public investment;</li> <li>Domestic resource mobilisation.</li> </ul>	<ul style="list-style-type: none"> <li>Low real interest rates;</li> <li>Access to domestic credit and targeting.</li> </ul>	<ul style="list-style-type: none"> <li>Intermediate regime (intervention in the foreign exchange market as required) to ensure competitive RER.</li> </ul>

9. For a discussion on short-term (countercyclical) macroeconomic policies, see Weeks (2010).

10. Weeks and Patel (2007) argue that an active (discretionary) fiscal policy serves three main functions: (i) short-run countercyclical; (ii) (long-term) growth enhancing; and (iii) equity-fostering.

11. Saad-Filho (2007) argues that monetary policy can contribute to pro-poor growth through: (i) supporting pro-poor fiscal policies; (ii) avoiding excessively low, excessively high or rapidly accelerating inflation; (iii) helping stabilise the balance of payments and the real exchange rate; and (iv) improving resource allocation in the economy – by targeting credit to priority sectors and effectively managing the capital account.



Overall, this framework favours active macroeconomic policies rather than subordinating them to narrow objectives such as price stability. In fact, excessive concerns with maintaining small fiscal deficits, targeting low inflation rates and a commitment to a fully flexible exchange rate regime will most likely have a regressive effect on income distribution and poverty reduction.

## 5.2 How to Improve Absorption and Spending of Resource Inflows?

While foreign resource inflows provide useful finance to recipient countries, their magnitude and volatility may create macroeconomic management problems. If not properly addressed, these may threaten (external and internal) debt sustainability, undermine domestic resource mobilisation, raise interest rates, contribute to inflationary pressures, and lead to exchange rate appreciations. Hence, it is important to choose an appropriate macroeconomic framework that allows governments and central banks to respond adequately to these challenges.

We can subdivide the main issues concerning the macroeconomic management of foreign resource inflows into two broad domains: (i) fiscal challenges, which are dealt with by recipient governments; and (ii) macroeconomic challenges, which are usually under the sphere of influence of central banks.

The first incorporates questions about the impact of resource inflows on the size and composition of public spending, domestic revenues, fiscal deficit, debt sustainability and external dependency. ODA is the most important source of external fiscal revenue for low-income countries, but other flows (e.g., FDI and remittances) may also affect the fiscal budget through taxation and even spending. This often leads to policy decisions relating to how much ODA the government should spend and whether it should save some of the resources to smooth the level of expenditure – for when resources are scarce.

The second focuses on concerns of exchange rate appreciation, rising price inflation and high interest rates due to large inflows of foreign exchange – Dutch disease. This often leads to debates about the optimal level of sterilisation (see Prati et al., 2006) and effective exchange rate regimes (see Buffie et al., 2004). These issues are linked to the level of central bank intervention in monetary and foreign exchange markets, and are usually applicable for any resource inflow.

Nonetheless, these two broad policy areas are interdependent and should be jointly considered. Fiscal decisions crucially depend on macroeconomic circumstances (e.g., the interest rate on domestic public debt), while central bank objectives are partly influenced by the government's policy stance.<sup>12</sup> This interdependence has led to the development of the analytical framework presented before.

We will now propose policy measures to improve absorption and spending of foreign resource inflows (TABLE 6). Promoting the effective use of foreign resources will be crucial to accelerate progress towards the achievement of the MDGs.

---

12. For example, a change in the 'import content' of public (capital) expenditures may have an effect on the level of international reserves, exchange rate pressures, and domestic inflation.

**TABLE 6**  
**Policy Measures to Improve Absorption and Spending**

	Improving Absorption	Improving Spending
<b>Governments</b>	<ul style="list-style-type: none"> <li>Invest in domestic economic research and knowledge (e.g., better forecasting tools)</li> </ul>	<ul style="list-style-type: none"> <li>Scale up of public investment programmes;</li> <li>Finance other pro-poor expenditures;</li> <li>Support domestic resource mobilisation;</li> <li>Ensure that FDI benefits the domestic economy and ultimately the poor.</li> </ul>
<b>Central Banks</b>	<ul style="list-style-type: none"> <li>Promote the use of intermediate regimes rather than flexible regimes;</li> <li>Target the selling of foreign exchange by purpose;</li> <li>Manage and protect the capital account.</li> </ul>	<ul style="list-style-type: none"> <li>Re-orientate the remit of central banks from narrow macroeconomic goals to growth and employment.</li> </ul>
<b>Donors</b>	<ul style="list-style-type: none"> <li>Minimise the pro-cyclicality of resource inflows;</li> <li>Reduce the volatility of foreign resources.</li> </ul>	<ul style="list-style-type: none"> <li>Make aid inflows more predictable;</li> <li>Facilitate and reduce the costs of remittance transfers.</li> </ul>

### 5.2.1 Measures to Improve Absorption

In order to ensure a ‘real resource transfer’, recipient countries should seek to ‘absorb’ foreign resources by their full amount. However, this is rarely the case, even when time lags are taken into account.<sup>13</sup> Central banks may be reluctant to sell the entirety of the foreign exchange reserve in the currency market due to the ‘fear of appreciation’ (McKinley, 2005).<sup>14</sup> Since the swap of foreign exchange for domestic currency contributes to the appreciation of the nominal exchange rate, central banks may prefer to build up international reserves in order to protect the currency. Moreover, resource inflows are known to be volatile and unpredictable. This will lead to a similarly cautious policy response by the central banks, in their attempt to smooth foreign exchange availability and avoid significant balance of payments problems (e.g., quick depletion of reserves). Finally, the private sector may use the extra foreign currency to increase their foreign asset holdings (capital outflows) rather than use it to import goods and services from abroad. It is therefore important to remove the obstacles that deter “full absorption.” Some policy measures could be useful for that purpose:

- **Reduce the volatility of foreign resource inflows and mitigate their impacts**

The volatility of foreign resources often leads to macroeconomic instability, requiring regular interventions by central banks. Promoting *multi-year commitments* of ODA and FDI will help central banks forecast foreign exchange inflows and estimate future needs. Moreover, smoothing foreign exchange availability will reduce the need to build up international reserves and compensate the impact of other external shocks – e.g., fall in export receipts due to terms of trade shocks – rather than compound them. This is also likely to reduce the volatility of the real exchange rate and increase investor confidence.

It has also been suggested that recipient countries could create a *foreign reserve buffer* to mitigate the impacts of volatile aid inflows (Eifert and Gelb, 2008). This would act as an insurance mechanism, smoothing the absorption of aid inflows.<sup>15</sup> However, a foreign reserve buffer may be politically difficult to implement. Donors might be reluctant to set money aside due to short-run considerations (e.g., it protects recipients from policy conditionality). Moreover, it may also be difficult to defend

13. Foreign resources may be released up-front in large instalments (e.g., budget support), which are only gradually absorbed through time. Moreover, the private sector may decide to temporarily hold foreign currency. Econometric methodologies that account for these dynamic effects still suggest that long-run absorption is only partial.

14. A related concept is the “fear of floating” (Calvo and Reinhart, 2002). This refers to countries with *de jure* “independently floating” exchange rate regimes, when in fact the central bank restricts (manages) the float through interventions in the foreign exchange market (e.g., building up reserves) and open market operations.

15. Prati and Tressel (2006) make the case for active central bank smoothing of aid inflows.

it internally, as resources are being saved rather than spent. Nonetheless, there might be a strong case for this strategy when medium-term concerns are taken into consideration.

- **Promote the use of intermediate regimes rather than flexible regimes**

Intermediate exchange rate regimes are often seen as the optimal strategy to deal with large inflows of foreign resources.<sup>16</sup> Buffie et al. (2008) show that “a managed float, with little or no sterilization of increases in the monetary base, supports the smooth absorption of the increased aid without incurring higher inflation, higher real interest rates or overshooting of the real exchange rate.” Hence, there is a strong case for central bank intervention in the currency market when required. The recent financial crisis has exposed the weaknesses of flexible regimes, as currencies became excessively vulnerable to capital reversals – e.g., the South African rand and the Zambian kwacha. Sharp depreciations of nominal exchange rates typically lead to periods of serious macroeconomic instability.

Although a flexible regime precludes reserve accumulation, aid absorption is not necessarily higher than in other regimes. Flexible regimes are often associated with a liberalised capital account,<sup>17</sup> which leads to competition between capital outflows (e.g., portfolio investment) and (capital) imports for the scarce amount of foreign exchange. Moreover, medium-term absorption is likely to be more important. Many countries have resisted committing to *de facto* flexible regimes and they should continue to do so.

- **Target the selling of foreign exchange by purpose**

Increasing the availability of foreign exchange in local currency markets does not necessarily ensure that foreign inflows are “absorbed.” The private sector may decide to increase its holdings of foreign assets (e.g., shares or bonds), which contributes to the widening of the non-aid capital account deficit. Moreover, even if foreign inflows are being absorbed, they may be used to import luxury consumer goods, in which case the impact on the domestic economy will be minimal.

Hence, countries could implement measures that promote a more effective use of foreign resources. If a significant share of foreign currency is made available to small businesses, this would enable them to import capital goods (e.g., machinery) that would significantly increase their productivity and generate employment in the economy. Countries could establish a system of *foreign exchange permits* and set ceilings for certain purposes. This would enable a targeted sale of foreign exchange, and limit imports of luxury consumer goods. The benefits could be significant in countries with foreign exchange shortages.

- **Minimise the pro-cyclicality of resource inflows**

Pro-cyclical resource inflows are likely to feed into domestic macroeconomic instability. However, workers’ remittances and some components of foreign aid (e.g., disaster relief) tend to be countercyclical. Some aid activities could also be designed in a way to compensate for negative external shocks. For example, Dhasmana (2008) proposes a method of indexing aid to terms of trade shocks, which automatically triggers counter-cyclical aid inflows.<sup>18</sup> Mitigating the impact of pro-cyclicality and promoting counter-cyclical resource inflows could lead to significant welfare gains through two main channels: (i) providing vital foreign exchange, when export receipts and foreign investment are sluggish; (ii) stimulating aggregate demand in economic downturns, when domestic revenues are low.

---

16. Our use the term “intermediate regime” includes (heavily) managed floats, while “flexible regime” refers to independent (pure) and “lightly” managed floats (see Yagci, 2001:4).

17. Under the “impossible trinity,” countries willing to open their capital account and maintain monetary independence would require to adopt a flexible exchange rate regime.

18. Collier and Dehn (2001) argue that the adverse effects of terms of trade shocks on economic growth can be mitigated through offsetting increases in aid. Hence, there is a case for targeting aid to countries experiencing (or prone to) negative shocks.

During the recent economic crisis, several developing countries were in danger of running out of foreign exchange reserves (e.g., Ethiopia). In some cases, this led to the implementation of restrictive measures, such as import rationing, which further constrained economic growth and the recovery.

- **Manage and protect the capital account**

Developing countries should aim to attract foreign capital, since these flows have the potential to stimulate the domestic economy. However, some types of foreign capital might be unproductive and may even carry high associated risks. In a review of the recent evidence, Rodrik and Subramanian (2009) conclude that financial liberalisation has not generated increased investment, higher growth, better consumption smoothing or reduced volatility.<sup>19</sup> Short-term private capital inflows (“hot money”) have rapidly increased in LICs, but are often linked to speculative attacks and can be a major destabilising force (TABLE 7).

Effective regulation of foreign inflows – through the design of coherent controls that restrict unproductive capital – could be enforced in order to protect and insulate recipient economies from further external volatility. Moreover, measures to contain capital outflows could be implemented. For example, limiting the amount of profits that foreign businesses are allowed to repatriate and how much domestic residents are able to invest abroad can not only ensure a more stable exchange rate but also help retain financial resources to be further invested in the domestic economy. Epstein (2009) proposes a number of capital management “techniques,” including taxes on foreign exchange transactions and capital inflows, quantitative limits on foreign ownership of domestic companies’ assets, and exchange rate controls.

- **Invest in domestic economic research and knowledge**

Macroeconomic management can be significantly improved by accurate diagnosis and production of relevant research. For example, better forecasting models may help anticipate future bottlenecks (e.g., low international reserves) and thus increase the policy space for appropriate interventions. Technical assistance programmes that help train staff in key ministries and central banks can play an important role in improving day-to-day economic management. Moreover, the development of realistic macroeconomic models adapted to the specific characteristics and needs of recipient economies will improve the ownership and efficiency of macroeconomic policy in developing countries.

### 5.2.2 Measures to Improve Spending

In the same way that central banks are expected to fully absorb foreign resources, recipient governments are encouraged to fully spend these inflows.<sup>20</sup> However, the definition of *spending* does not distinguish between different types of expenditure (e.g., capital versus recurrent) or whether this should be achieved through higher spending or lower revenues. Hence, it is important to assess the fiscal dynamics triggered by higher foreign resources, in addition to their impact on the non-aid fiscal deficit.

A crucial requirement for the achievement of the MDGs is the need to scale up investment expenditures. Recipient governments play a central role in this regard, through their ability to channel foreign resources to increase both public and private investment. Public investment programmes that contribute to the improvement of infrastructure and human capital will support the thriving private sector. Moreover, foreign resources inflows should not jeopardise medium-term fiscal sustainability

---

19. Financial liberalisation often refers to the deregulation of the (domestic) financial sector and the opening of the capital account.

20. For ODA this means that the non-aid fiscal deficit increases by the amount of the aid inflow. For other resources it could relate to the fiscal component of the inflow (e.g., corporate tax revenue from foreign firms) and the corresponding fiscal deficit (e.g., excluding that component). This can be significant in countries with large FDI inflows, while ensuring that these receipts are being used to the benefit of the local economy.

by undermining domestic resource mobilisation. Hence, while recipient countries should fully spend foreign resources, it is crucial that this is mainly achieved through higher public investment rather than (excessive) recurrent spending or lower domestic revenue collection.

It is rare that countries fully spend foreign resources (e.g., aid). Governments may decide to “save” part of the inflow, at least in the short-term, due to the “fear of inflation” (McKinley, 2005). The justification is that aid inflows contribute to an increase in domestic liquidity, which will place an upward pressure on domestic prices if higher demand is not met by supply. Consequently, central banks may also decide to (partially) sterilise the aid inflow through open market operations (e.g., selling treasury bills) to reduce domestic liquidity. This will often lead to higher interest rates, which will deter domestic credit and consequently private investment.

Furthermore, governments may prefer to smooth their expenditure patterns and avoid the uncertainty associated with aid disbursements. For example, when aid disbursements are below expectations (i.e., commitments), governments may resort to domestic borrowing in order to finance planned expenditures. However, an unanticipated aid windfall can be partially used to pay off debts previously incurred. We will now propose measures to improve “spending,” with a particular focus on public investment:

- **Re-orientate the remit of central banks from narrow macroeconomic goals to growth and employment**

One of the main objectives of (independent) central banks is to ensure macroeconomic stability, usually expressed in low inflation targets. However, this narrow objective should not come at the cost of economic growth and employment generation. Inflation is affected by a number of internal and external factors and there is often limited scope for central bank intervention – especially in the presence of large external shocks. Nonetheless, central banks usually resort to credit tightening policies (e.g., raising interest rates), which will have a dampening effect on the private sector and potentially reverse the benefits of fiscal expansions.

Hence, central banks should take into consideration a broader set of socio-economic goals when deciding on monetary policy interventions. Moreover, coordinated fiscal and macroeconomic policies can avoid the need for sterilising foreign resource inflows and reduce the impact on private investment. This would enable governments to improve *spending* of foreign resources without the “fear of inflation.”

- **Make aid inflows more predictable**

Aid unpredictability usually produces asymmetric impacts on the fiscal budget (Celasun and Walliser, 2008). Unanticipated aid shortfalls often lead to cuts (or delays) in public investment programmes, since reductions in recurrent spending – e.g., wages and interest payments – tend to be politically more controversial. If governments are willing to protect planned investment expenditures, aid shortfalls ought to be compensated by domestic borrowing. This often implies large economic costs, due to high lending interest rates. Unanticipated aid windfalls, however, are likely to be spent on the recurrent budget, since these are easier and faster to implement. Investment projects require considerably more time to be undertaken. Governments may also be keen to use aid windfalls to pay off onerous domestic debts. Overall, the unpredictability of aid inflows will discourage long-term investment in capital and skills, since its “stop-go” nature induces a reallocation of spending from investment into consumption – especially if aid is provided as budget support.

Hence, donors should provide commitments with longer time horizons – linked to the recipients’ long-term development strategies – and disburse aid in a timely manner. Improving the predictability of aid inflows will reduce the need to resort to expensive domestic borrowing and promote a better allocation of resources between capital and recurrent spending.<sup>21</sup> Donors should disburse aid in accordance with agreed schedules and refrain from using budget support as an economic

---

21. However, some aid inflows are unpredictable due to their intrinsic reactive nature (e.g., humanitarian aid).

policy conditionality tool. Moreover, substantial efficiency gains can be achieved by harmonising and aligning aid activities, in the spirit of the Paris Declaration and the Accra Agenda for Action. Finally, donors could help recipient countries set up “aid buffers,” as previously discussed. An aid windfall would be partly used to increase the aid buffer, which would then be employed during aid shortfalls, smoothing the level of expenditure.

- **Scale up of public investment programmes**

Aid inflows should be mostly used to finance investment expenditures, such as economic infrastructure, education and health, since these are likely to generate larger multiplier effects in the economy and raise the incomes of the poor. Public investment will crowd-in the private sector through lowering business costs (e.g., transportation) and improving the skills of the workforce (e.g., vocational training). This would alleviate existing supply-side constraints and accommodate higher aggregate demand.

Moreover, promoting the export sector (“aid for trade”) could reverse some of the domestic reallocation of resources induced by large inflows of foreign exchange. In particular, countries should aim to increase the productivity and competitiveness of sectors that export value-added products. Finally, prioritising aid spending that contains a high import content (especially capital) would also reduce the reallocation of resources in the domestic economy, while contributing to economic growth.

- **Finance other pro-poor expenditures**

There are also significant benefits in using available foreign and domestic resources to support social protection systems that target the poorest and most vulnerable households. Cash transfer schemes are usually an effective way to reduce vulnerability to shocks, ensure that households do not fall further into poverty and reduce financial barriers to access basic services. Moreover, humanitarian aid is strongly countercyclical and can have a strong stabilising impact in fragile economies.

- **Support domestic resource mobilisation**

Governments should seek to gradually reduce their reliance on external finance. This would make public institutions more accountable to their citizens and consequently improve the effectiveness of public spending, through better budget monitoring and participation. Moreover, it would improve fiscal planning and expenditure smoothing, since aid inflows are significantly more unstable than domestic sources of revenue. Using hard-negotiated fiscal space to reduce tax rates (with a view to stimulating the economy) may not be a sustainable or effective strategy. It will encourage aid dependence, while its benefits may not be realised – tax cuts may not lead to higher investment. Instead, foreign aid inflows should be used to strengthen domestic revenue collection systems, namely through the provision of technical assistance (e.g., staff training and software systems).

- **Ensure that FDI benefits the domestic economy and ultimately the poor**

FDI inflows can be a major catalyst for growth. However, governments should selectively attract investments that have the potential to generate significant technological and economic spillovers. Encouraging foreign ventures that are complementary to existing local firms (creating demand or supply for local businesses) would create substantial synergies and employment. Moreover, certain activity sectors are more likely to facilitate the transfer of knowledge and technology (e.g., telecommunications) and generate employment (e.g., labour-intensive manufacturing). Nonetheless, the evidence suggests that most FDI inflows to low-income countries are associated with the oil, gas and mining sectors.

In resource-rich countries, transparency and accountability becomes a central issue. Promoting the implementation of the Extractive Industries Transparency Initiative and adhering to the principles of the Natural Resource Charter would ensure that the population benefits from natural resource exploitation.

Finally, governments should not unduly sacrifice future tax revenues through the proliferation of exemptions (e.g., corporate tax holidays), lower tax rates, or even subsidies. Instead, governments could focus on improving physical infrastructure, streamlining business procedures, and creating a large pool of skilled labour in order to attract the interest of foreign investors.

- **Facilitate and reduce the costs of remittance transfers**

Remittance inflows can improve welfare by lifting households out of poverty and protecting them against income shocks (Chami et al., 2008). Since remittances are typically counter-cyclical, they are crucial to smoothing consumption patterns and have even been associated with increased household investments in education, entrepreneurship, and health (Ratha et al., 2009). Therefore, “sending” and “recipient” countries could take actions to promote and facilitate such transfers.<sup>22</sup> For example, bilateral arrangements and financial sector reform can considerably reduce the cost of transferring funds – which are disproportionately high for small sums. Moreover, efforts to formalise remittance flows can assist poor households in accessing formal financial markets, e.g., through savings accounts (Gupta et al., 2009). These funds can also be used as collateral for small businesses lacking access to formal financial services.

Technology may hold the key to facilitate international money transfers and empower “unbanked” rural populations. For example, an innovative service called M-PESA (derivation of the Swahili equivalent to “mobile money”) allows poor Kenyan households to receive remittances from the United Kingdom via mobile phone.<sup>23</sup> Mobile phone credit can then be used to pay utility bills or withdraw money. This technology can benefit large segments of the population currently marginalised by the formal financial sector, since the ratio of mobile phone owners to bank account holders among the poor is greater than one.

Improvements in tax collection systems could ensure that remittances increase domestic revenue, via higher consumption taxes. Recipient governments could then use the extra fiscal space to increase public investment, namely in infrastructure and education, in order to encourage private investment and accelerate growth.

## 6 Conclusion

Additional resources will be required to support developing countries in the attainment of the Millennium Development Goals. Our examination of recent trends suggests that, up until the outset of the global economic crisis, low-income countries had managed to attract an increasing volume of foreign resources. However, their global allocation remained uneven, with the majority of resources – even foreign aid – flowing to middle-income countries. Meanwhile, the current economic crisis has cast some doubts over the future level of these inflows.

Although volumes are important, we have also argued that the specific characteristics of resource inflows may play an important role in determining socio-economic outcomes. We found evidence that the volatility of foreign resources has increased in recent years, while the unpredictability of aid disbursements and the pro-cyclical nature of capital flows are also a concern. These patterns are usually associated with damaging economic consequences, which undermine the positive impacts of foreign inflows.

In order to maximise the benefits of foreign resources for the domestic economy, recipient countries are often advised to fully *absorb* and *spend* inflows. We briefly reviewed the empirical evidence on the macroeconomic management of foreign aid, which suggests that recipient countries rarely absorb and spend the full amount of the inflow. This may be caused by concerns about inflation and exchange rate appreciation, and/or strategies to mitigate volatile and unpredictable aid inflows. Hence, we argue that these obstacles need to be addressed directly in order to allow for an effective utilisation of foreign resources.

---

22. Page and Plaza (2006) provide an inventory of policy measures to enhance the impact of remittances.

23. These and other features are usually called mobile banking (or M-Banking).

The paper proposes a pro-poor macroeconomic framework, which in our opinion is better suited to deal with the macroeconomic challenges arising from large resource inflows. Within this framework, governments and central banks have clearly defined complementary roles, which facilitate macroeconomic policy coordination and support economic growth. The focus of fiscal policy is on scaling up public investment programmes and improving domestic revenue mobilisation, while monetary policy accommodates the fiscal expansion through domestic credit expansion and by targeting low interest rates. In addition, exchange rate management (i.e., an intermediate regime) provides a supporting role to these policies, while financial policy focuses on promoting productive employment.

Finally, we suggest the implementation of specific policy recommendations, which have the potential to maximise the benefits of foreign resource inflows. For example, while we call for donors to increase the amount of foreign resources available to developing countries, we also argue that these need to be disbursed in a stable and predictable manner – and targeted to productive activities. Moreover, we advocate for an efficient management of the capital account and foreign exchange reserves. We believe that the policy proposals outlined in this paper are likely to promote a more effective use of foreign resources, with a view to accelerating progress towards the MDGs.



## 7 References

- Adams, R. and J. Page (2005), "Do International Migration and Remittances Reduce Poverty in Developing Countries?" *World Development*, 33(10), 645-1669
- Aggarwal, R., A. Demirgüç-Kunt and M. Peria (2006), "Do Workers' Remittances Promote Financial Development?" *World Bank Policy Research Working Paper* 3957.
- Aiyar, S. and U. Ruthbah (2008), "Where Did All the Aid Go? An Empirical Analysis of Absorption and Spending." *International Monetary Fund, Working Paper* 08/34.
- Arellano, C., A. Bulir, T. Lane and L. Lipschitz (2009), "The Dynamic Implications of Foreign Aid and Its Variability." *Journal of Development Economics*, 88(1), 87-102.
- Barajas, A., R. Chami, C. Fullenkamp, M. Gapen and P. Montiel (2009), "Do Workers' Remittances Promote Economic Growth?" *International Monetary Fund, IMF Working Paper* 09/153.
- Buffie, E., C. Adam, S. O'Connell and C. Pattillo (2008), "Riding the Wave: Monetary Responses to Aid Surges in Low-Income Countries." *European Economic Review*, 52(8), 1378–1395.
- Buffie, E., C. Adam, S. O'Connell and C. Pattillo (2004), "Exchange Rate Policy and the Management of Official and Private Capital Flows in Africa." *IMF Staff Papers*, 51(Special Issue), 126-160.
- Bulir, A. and J. Hamann (2008), "Volatility of Development Aid: From the Frying Pan to the Fire?" *World Development*, 36(10), 2048-2066.
- Calvo, G. and C. Reinhart (2002), "Fear of Floating." *Quarterly Journal of Economics*, 107(2), 379-408.
- Carkovic, M. and R. Levine (2005), "Does Foreign Direct Investment Accelerate Economic Growth?" in T. Moran, E. Graham and M. Blomström (eds.), *Does Foreign Direct Investment Promote Development?*, Washington, DC: Institute for International Economics, pp. 195-220.
- Celasun, O. and J. Walliser (2008), "Predictability of Aid: Do Fickle Donors Undermine the Predictability of Aid?" *Economic Policy*, 23(55), 545-86.
- Chami, R., A. Barajas, T. Cosimano, C. Fullenkamp, M. Gapen and P. Montiel (2008), "Macroeconomic Consequences of Remittances." *International Monetary Fund, Occasional Paper* 259.
- Chami, R., C. Fullenkamp and S. Jahjah (2005), "Are Immigrant Remittance Flows a Source of Capital for Development?" *IMF Staff Papers*, 52(1), 55-81.
- Chowdhury, A. and G. Mavrotas (2006), "FDI and Growth: What Causes What?" *The World Economy*, 29(1), 9-19.

- Clemens, M., S. Radelet and R. Bhavnani (2004), "Counting Chickens When They Hatch: The Short-term Effect of Aid on Growth." Center for Global Development, Working Paper 44.
- Collier, P. and J. Dehn (2001), "Aid, Shocks, and Growth." World Bank Policy Research Working Paper 2688.
- Dhasmana, A. (2008), "Welfare Gains of Aid Indexation in Small Open Economies." International Monetary Fund, Working Paper 08/101.
- Eifert, B. and A. Gelb (2008). "Reforming Aid: Toward More Predictable, Performance-Based Financing for Development." World Development, 36(10), 2067-2081.
- Epstein, G. (2009), "Should Financial Flows Be Regulated? Yes." United Nations Department of Economic and Social Affairs, Working Paper 77.
- Fielding, D. and G. Mavrotas (2005), "The Volatility of Foreign Aid." World Institute for Development Economics Research, Discussion Paper 2005/06.
- Gabriele, A., K. Baratav and A. Parikh (2000), "Instability and Volatility of Capital Flows to Developing Countries." The World Economy, 23(8), 1031-1056.
- GDF (2010), Global Development Finance: External Debt of Developing Countries. Washington, D.C.: World Bank.
- GEP (2010), Global Economic Prospects (Summer 2010): Fiscal Headwinds and Recovery. Washington, D.C.: World Bank.
- Gupta, S., C. Pattillo and S. Wagh (2009), "Effect of Remittances on Poverty and Financial Development in Sub-Saharan Africa." World Development, 37(1), 104-115.
- Gupta, S., R. Powell and Y. Yang (2006), Macroeconomic Challenges of Scaling Up Aid to Africa: A Checklist for Practitioners. Washington, D.C.: International Monetary Fund.
- Hansen H. and J. Rand (2006), "On the Causal Links Between FDI and Growth in Developing Countries." The World Economy, 29(1), 21-41.
- Henrik H. and F. Tap (2000), "Aid Effectiveness Disputed." Journal of International Development, 12(3), 375-398.
- Hermes, N. and R. Lensink (2003), "Foreign Direct Investment, Financial Development and Economic Growth." Journal of Development Studies, 40(1), 142-163.
- Hudson, J. and P. Mosley (2008), "Aid Volatility, Policy and Development." World Development, 36(10), 2082-2102.
- Hussain, M., A. Berg and S. Aiyar (2009), "The Macroeconomic Management of Increased Aid: Policy Lessons from Recent Experience." Review of Development Economics, 13(3), 491-509.

- IMF (2005), "The Macroeconomics of Managing Increased Aid Inflows: Experiences of Low-Income Countries and Policy Implications." SM/05/306 (August 8, 2005), unpublished, Policy Development and Review Department
- Kharas, H. (2008), "Measuring the Cost of Aid Volatility." Brookings Institution, Wolfensohn Center for Development, Working Paper 3.
- Killick, T. and M. Foster (2007), "The Macroeconomics of Doubling Aid to Africa and the Centrality of the Supply Side." *Development Policy Review*, 25(2), 167-192.
- Lensink, R. and O. Morrissey (2006), "Foreign Direct Investment: Flows, Volatility, and the Impact on Growth." *Review of International Economics*, 14(3), 478-493.
- Lensink, R. and O. Morrissey (2000), "Aid Instability as a Measure of Uncertainty and the Positive Impact of Aid on Growth." *Journal of Development Studies*, 36(3), 31-49.
- Lensink, R. and H. White (2000), "Aid Allocation, Poverty Reduction and the Assessing Aid Report." *Journal of International Development*, 12(3), 399-412.
- Li, Y. and F. Rowe (2007), "Aid Inflows and the Real Effective Exchange Rate in Tanzania." World Bank Policy Research Working Paper 4456.
- Lumbila, K. (2005), "What Makes FDI Work? A Panel Analysis of the Growth Effect of FDI in Africa." World Bank, Africa Region Working Paper Series 80.
- Martins, P. (2010), "Aid Absorption and Spending in Africa: A Panel Cointegration Approach." Institute of Development Studies, mimeo.
- McKinley, T. (2005), "Why is the Dutch Disease Always a Disease? The Macroeconomic Consequences of Scaling Up ODA." UNDP, International Poverty Centre, Working Paper 10.
- Mongardini, J. and B. Rayner (2009), "Grants, Remittances, and the Equilibrium Real Exchange Rate in Sub-Saharan Africa Countries." International Monetary Fund, IMF Working Paper 09/75.
- Osei, R., O. Morrissey and T. Lloyd (2005), "The Fiscal Effects of Aid in Ghana." *Journal of International Development*, 17, 1037-1053.
- Osei, R., O. Morrissey and R. Lensink (2002), "The Volatility of Capital Inflows: Measures and Trends for Developing Countries." Centre for Research in Economic Development and International Trade (CREDIT), Research Paper 02/20.
- Page, J. and S. Plaza (2006), "Migration Remittances and Development: A Review of Global Evidence." *Journal of African Economies*, 15(Supplement 2), 245-336.
- Pallage, S. and M. Robe (2001), "Foreign Aid and the Business Cycle." *Review of International Economics*, 9(4), 641-672.

- Prati, A. and T. Tressel (2006), "Aid Volatility and Dutch Disease: Is There a Role for Macroeconomic Policies?" International Monetary Fund, Working Paper 06/145.
- Rajan, R. and A. Subramanian (2005), "What Undermines Aid's Impact on Growth?" International Monetary Fund, Working Paper 05/126.
- Ratha, D. (2009), "Remittances in Development: A Lifeline to Poor Countries," Finance & Development, 46(4), 30.
- Rodrik, D. and A. Subramanian (2009), "Why Did Financial Globalization Disappoint?" IMF Staff Papers (2009), 56, 112–138.
- Saad-Filho, A. (2007), "Monetary Policy." UNDP, International Poverty Centre, Research Programme on Economic Policies, MDGs and Poverty, Training Module 2.
- Weeks, J. (2010), "Active Macro Policy for Accelerating Achievement of the MDG Targets." Research Paper prepared for UNDP New York.
- Weeks, J. and T. McKinley (2007), "The Macroeconomic Implications of MDG-Based Strategies in Sub-Saharan Africa." UNDP, International Poverty Centre, Research Brief 4.
- Weeks, J. and S. Patel (2007), "Fiscal Policy." UNDP, International Poverty Centre, Research Programme on Economic Policies, MDGs and Poverty, Training Module 1.
- World Bank (2010), World dataBank, accessible at <http://data.worldbank.org/data-catalog>

# Annex A

## A1. Other Tables

**TABLE 7**  
**Foreign Resource Flows to Low-Income Countries (USD million)**

	2001	2002	2003	2004	2005	2006	2007	2008
Net private and official flows	8,203	9,031	9,849	13,031	13,181	20,113	38,309	35,166
Net equity inflows	4,494	5,308	5,693	6,257	7,685	13,025	27,296	25,849
Net FDI inflows	4,468	5,302	5,666	6,236	7,518	11,643	20,902	26,440
Net portfolio equity inflows	25	5	27	21	167	1,383	6,394	-591
Net debt flows	3,709	3,724	4,155	6,773	5,496	7,088	11,013	9,317
Official Creditors (WB, IMF, ...)	..	..	..	..	..	..	..	..
Private Creditors	..	..	..	..	..	..	..	..
Change in reserves (- = increase)	-1,901	-4,344	-7,045	-5,084	-1,885	-9,715	-15,342	-1,519
<i>Memorandum items</i>								
Official grants excluding TC	..	..	..	..	..	..	..	..
Workers' remittances	8,131	10,410	11,472	13,214	16,097	19,940	24,600	31,567

Source: Compiled from GDF online (February 2010 update).

**TABLE 8**  
**Foreign Resource Flows to Developing Countries (% of Group Total)**

	1990-94	1995-99	2000-04	2005-08
<i>ODA (% Group Total)</i>				
Low income	37.0	38.3	43.7	39.4
Middle income	63.0	61.7	56.3	60.6
East Asia & Pacific	17.5	19.7	14.9	9.7
Europe & Central Asia	5.0	7.4	9.6	6.8
Latin America & Caribbean	10.9	13.8	11.4	8.3
Middle East & North Africa	16.1	12.4	13.3	23.4
South Asia	13.3	10.9	11.8	11.2
Sub-Saharan Africa	37.1	35.8	39.0	40.7
<i>FDI (% Group Total)</i>				
Low income	4.0	3.1	3.1	3.7
Middle income	96.0	96.9	96.9	96.3
East Asia & Pacific	50.7	38.9	33.1	32.2
Europe & Central Asia	9.6	10.5	16.6	28.3
Latin America & Caribbean	30.1	41.8	36.9	21.2
Middle East & North Africa	3.7	1.8	3.4	5.9
South Asia	1.7	2.5	3.6	6.6
Sub-Saharan Africa	4.3	4.7	6.4	5.7
<i>Remittances (% Group Total)</i>				
Low income	7.4	6.3	8.2	8.7
Middle income	92.6	93.7	91.8	91.3
East Asia & Pacific	11.8	18.2	23.2	25.1
Europe & Central Asia	10.3	15.0	12.0	16.6
Latin America & Caribbean	20.4	22.4	25.6	22.3
Middle East & North Africa	34.7	19.2	14.5	11.1
South Asia	16.9	19.4	20.0	19.1
Sub-Saharan Africa	5.9	5.8	4.7	5.8

Source: Calculated from the World Bank (2010).

**TABLE 9**  
**Aid Absorption and Spending**

	Not Spent	Partly Spent	Mostly Spent	Fully Spent
Not Absorbed	Ghana (0, 7)			Tanzania (0, 91)
Partly Absorbed	Ethiopia (20, 0)		Uganda (27, 74)	Mauritania (-, 100)
Mostly Absorbed		Sierra Leone (-, -)		Mozambique (66, 100)
Fully Absorbed				

Source: Foster and Killick (2007).

## A2. Deriving Absorption and Spending from Macroeconomic Identities

In terms of aid *absorption*, we start with the following balance of payments identity:

$$\Delta R = CAB + KAB$$

where  $\Delta R$  stands for changes in international reserves,  $CAB$  is the current account balance, and  $KAB$  the capital account balance. If we pull out aid inflows from both accounts,<sup>24</sup> we obtain:

$$\Delta R = NACAB + NAKAB + Aid$$

where  $NACAB$  is the non-aid current account balance,  $NAKAB$  the non-aid capital account balance, and  $Aid$  is the net aid inflow. Taking differences and rearranging, we obtain the following expression:

$$\Delta Aid = -\Delta NACAB - \Delta NAKAB - \Delta \Delta R$$

This identity provides some insights into the possible uses of additional aid inflows: (i) to widen the non-aid current account deficit (usually through higher imports); (ii) to widen the non-aid capital account deficit (potentially through capital outflows); and (iii) to increase the accumulation of international reserves. We can now express aid absorption as the deterioration of the non-aid current account balance that is attributed to aid:

$$Absorption = -\Delta NACAB / \Delta Aid$$

Hence, “full absorption” is achieved when the non-aid current account deficit increases by the same amount of the extra aid inflow (the measure equals 1). A value close to 0 indicates a low level of absorption, and suggests that the additional foreign exchange provided by the aid inflow is used to increase international reserves and/or widen the non-aid capital account deficit.

In terms of aid *spending*, we start from the usual budget constraint facing the government:

$$I_G + CG = T + Aid + B + L$$

24. Some aid inflows are included in the current account (e.g. current grants) whilst others are incorporated in the capital account (e.g. capital loans).

where  $I_G$  stands for public investment,  $C_G$  public recurrent expenditures,  $T$  domestic revenue,  $B$  domestic borrowing and  $L$  external (non-concessional) loans. Re-arranging the budget constraint and differencing we obtain:

$$\Delta Aid = -\Delta NAGOB - (\Delta B + \Delta L)$$

where  $NAGOB$  is the non-aid government overall balance, i.e., domestic revenues ( $T$ ) minus total expenditures ( $I_G + C_G$ ). Hence, the potential uses of the additional aid inflows are: (i) to widen the non-aid current account deficit (through higher public spending and/or lower domestic revenues); and (ii) reduce the need for deficit financing (either domestic or external). We can now express aid spending as:

$$Spending = -\Delta NAGOB / \Delta Aid$$

Hence, “full spending” is achieved when the additional aid inflows are utilised to expand the non-aid fiscal deficit (the measure equals 1), whereas a value close to 0 suggests that aid has not been significantly spent.

### A3. Policy Responses to Aid Inflows

**TABLE 10**  
Example of an Aid Inflow of 100 Monetary Units

	Absorbed		Not Absorbed	
Spent	Central Bank Balance Sheet			
	NIR	0	RM	0
	NDA	0		
	Fiscal Accounts			
	EF	+100	DEF	+100
	DF	0		
Not Spent	Central Bank Balance Sheet			
	NIR	0	RM	-100
	NDA	-100		
	Fiscal Accounts			
	EF	+100	DEF	0
	DF	-100		
Spent	Central Bank Balance Sheet			
	NIR	+100	RM	+100
	NDA	0		
	Fiscal Accounts			
	EF	+100	DEF	+100
	DF	0		
Not Spent	Central Bank Balance Sheet			
	NIR	+100	RM	0
	NDA	-100		
	Fiscal Accounts			
	EF	+100	DEF	0
	DF	-100		

Obs.: “NIR” net international reserves, “NDA” net domestic assets, “RM” reserve money, “EF” external financing, “DF” domestic financing, and “DEF” deficit (excluding aid).

Source: Adapted from Berg et al (2007:8).



**United Nations Development Programme  
Bureau for Development Policy**

**Poverty Group**

304 East 45th Street

New York, NY, 11375

U.S.A.

E-mail: [poverty.reduction@undp.org](mailto:poverty.reduction@undp.org)

Website: [www.undp.org/poverty](http://www.undp.org/poverty)