# BUDGET POLICIES AND INVESTMENTS FOR CHILDREN – A TRAINING COURSE FOR UNICEF STAFF

## Module 3: Macroeconomics

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**Presenter: Geoff West**

**Venue: Senegal  May 2010**

For every child
Health, Education, Equality, Protection
ADVANCE HUMANITY

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# Learning Objectives

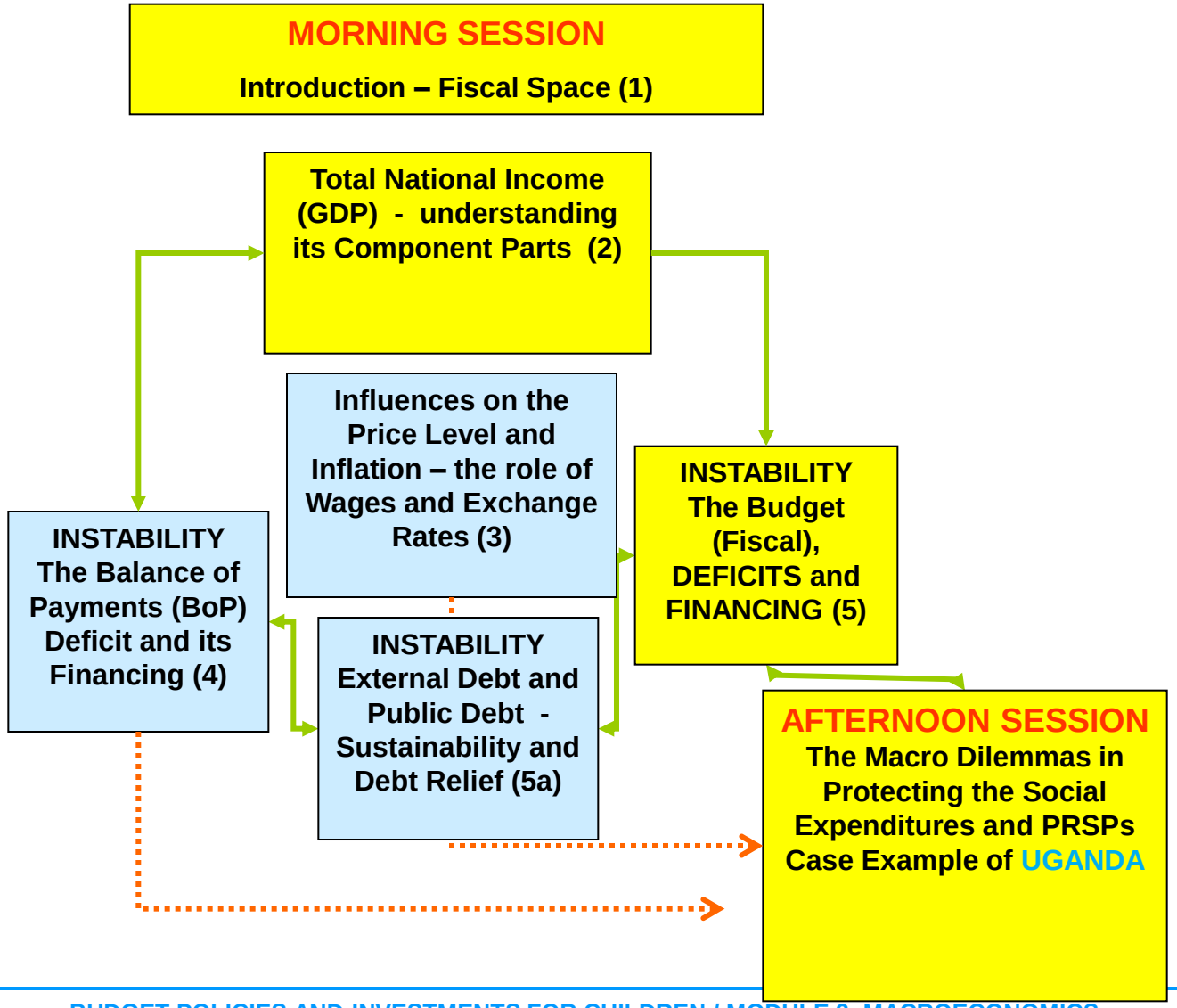
1. To BRIEFLY explain the key concepts of Macroeconomic analysis
2. To improve awareness of the Macro IMBALANCES (e.g. a budget deficit) that can cause ECONOMIC INSTABILITY in low and middle-income countries: sideways looks the global crisis
3. To help you understand why policy-makers face difficult TRADE-OFFs in dealing with these imbalances and instability when building anti-Poverty programmes
4. To encourage you to think about some of the ways in which budgets including social budgets can be affected by (and protected from) underlying macroeconomic circumstances

***Let's understand too that Macroeconomists are not insensitive to critical social needs although this may often appear to be the case !***

# First – A notes about Macroeconomic Method

- Macroeconomics involves a comprehensive analysis of many inter-connected aspects of an economy – growth, inflation, government budgets, employment, trade, exchange rates etc
- We need to simplify the (often mind-boggling) relationships between these if we are to make any sense at all about what is happening
- These simplifications are often referred to as “models” and use various degrees of algebraic formulations to study critical interactions
- Today we will almost completely AVOID the use of models. The key concepts will be illustrated with words and tables. Some limited algebra is provided (as an OPTIONAL EXTRA ONLY) mainly in the *Notes Pages*.

# A Preview


MORNING SESSION
Introduction – Fiscal Space (1)
Total National Income (GDP) - understanding its Component Parts (2)
Influences on the Price Level and Inflation – the role of Wages and Exchange Rates (3)
INSTABILITY The Balance of Payments (BoP) Deficit and its Financing (4)
INSTABILITY External Debt and Public Debt - Sustainability and Debt Relief (5a)
INSTABILITY The Budget (Fiscal), DEFICITS and FINANCING (5)
AFTERNOON SESSION
The Macro Dilemmas in Protecting the Social Expenditures and PRSPs
Case Example of UGANDA

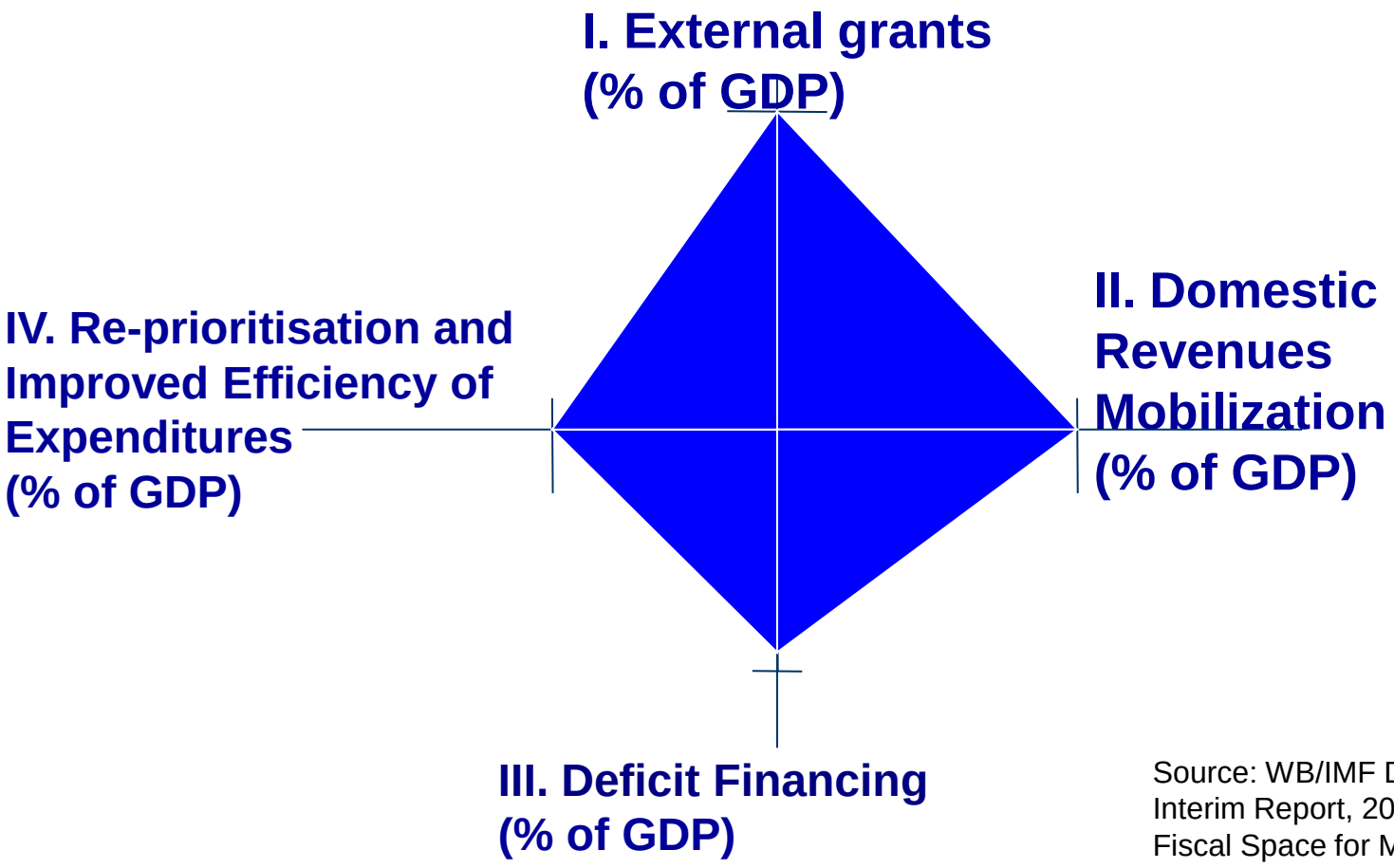
# Agenda

1. The Meaning of Fiscal Space
2. The Macro Aggregates - understanding the components of GDP
3. Introducing the Price Level – wages and exchange rates
4. Explaining why poor countries face such pressures and macro INSTABILITY from – the Balance of Payments (BOP) and Fiscal deficits
5. Financing limits on the BOP and (mainly) the Fiscal Deficits

# ONE

# Introduction - The Concept of Fiscal Space

# Fiscal space diamond




Source: WB/IMF Development Committee Interim Report, 2006 (and UNDP Primer: Fiscal Space for MDGs, June 2007)

# How do AFRICAN Countries perform on some of these approaches?

# Government Fees and Taxes (% of GDP)

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|
| Low-income countries | 16.1 | 16.5 | 17.1 | 17.1 | 16.4 | 16.6 |
| Benin | 16.6 | 16.8 | 20.6 | 19.5 | 19.4 | 19.3 |
| Burkina Faso | 12.8 | 13.0 | 13.6 | 11.4 | 13.5 | 13.2 |
| Ethiopia | 14.6 | 14.8 | 12.8 | 12.5 | 12.5 | 12.5 |
| Ghana | 21.8 | 21.9 | 22.7 | 22.8 | 22.4 | 22.3 |
| Kenya | 21.2 | 21.1 | 22.2 | 22.0 | 21.5 | 21.1 |
| Madagascar | 10.9 | 11.2 | 11.7 | 13.5 | 11.4 | 11.9 |
| Malawi | 19.2 | 17.5 | 18.7 | 20.0 | 21.0 | 21.3 |
| Mali | 17.5 | 17.3 | 16.6 | 15.5 | 16.7 | 16.1 |
| Mozambique | 14.1 | 15.0 | 16.0 | 16.3 | 16.0 | 16.6 |
| Niger | 10.6 | 13.0 | 15.2 | 18.4 | 12.2 | 12.3 |
| Rwanda | 13.5 | 13.1 | 13.6 | 15.6 | 13.1 | 13.7 |
| Senegal | 19.2 | 19.7 | 21.1 | 19.4 | 19.1 | 19.2 |
| Tanzania | 11.1 | 11.8 | 13.1 | 14.6 | 14.7 | 15.4 |
| Uganda | 12.2 | 12.5 | 12.6 | 13.0 | 12.4 | 12.3 |
| Zambia | 17.4 | 16.9 | 18.7 | 19.0 | 17.7 | 17.9 |

**Note:**

**(i) The large country variations (e.g. Ethiopia and Uganda versus Ghana and Kenya)**

**(ii) The significant year to year changes in some cases (e.g. Niger)**

**(iii) The very low ratios in Burkina Faso and Uganda**

Source; IMF *Regional Outlook for SSA*, April 2009

# Government Budget Deficits (including Grants)

## (% of GDP)

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|
| Low-income countries | -2.8 | 3.8 | -3.3 | -3.5 | -3.9 | -3.7 |
| Benin | -2.5 | -0.5 | 1.6 | -1.8 | -2.6 | -2.9 |
| Burkina Faso | -5.1 | 16.7 | -5.7 | -4.5 | -5.1 | -4.6 |
| Ethiopia | -4.4 | -3.9 | -3.6 | -3.0 | -1.5 | -1.1 |
| Ghana | -3.7 | -7.0 | -8.5 | -13.5 | -6.8 | -8.2 |
| Kenya | -1.8 | -2.5 | -3.0 | -3.9 | -4.2 | -3.8 |
| Madagascar | -4.3 | 37.4 | -2.9 | -2.6 | -3.3 | -3.8 |
| Malawi | -1.3 | 1.3 | -2.7 | -5.8 | -2.3 | -3.8 |
| Mali | -3.1 | 31.3 | -3.2 | -2.2 | -4.7 | -3.9 |
| Mozambique | -2.8 | -4.1 | -3.0 | -4.0 | -7.1 | -6.2 |
| Niger | -2.0 | 40.3 | -1.0 | 1.5 | -4.6 | -3.1 |
| Rwanda | 0.6 | -0.4 | -1.5 | 1.2 | -1.4 | -2.6 |
| Senegal | -3.0 | -5.7 | -3.7 | -4.3 | -4.4 | -4.0 |
| Tanzania | -2.8 | -4.7 | -3.7 | 0.0 | -4.6 | -5.0 |
| Uganda | -0.5 | 0.1 | -1.1 | -2.1 | -3.9 | -3.9 |
| Zambia | -2.7 | 19.8 | -1.3 | -1.5 | -2.6 | -1.7 |

**Note:**

**The large deterioration in some cases e.g Mozambique and Uganda**

**The big impact of grants and debt relife in some countries e.g. Madagascar in 2006**

Source; IMF *Regional Outlook for SSA*, April 2009

# Several ways to create Fiscal space

1.Raise more TAX revenue

2.Raise more FEE revenue

3.Run Larger Fiscal Deficits funded by:

- •Borrowing – Domestic (voluntary or enforced)
- •Borrowing – Foreign (concessional or non-concessional)
- •Grants from donors or NGOs
- •“Print money” – i.e. borrow from local central bank

4.Cut out waste in EXPENDITURE

5.Reallocate existing expenditures to PRIORITY areas

***In ALL economies there are always constraints on these actions – but especially so in poorer developing countries that are UNICEF’s main concern.***

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# Two

Introducing the main Macro Concepts needed to analyse the influence of Macroeconomics on Child Issues

# Topic 1: The Main Aggregates

First **TOTAL PRODUCTION** (or Gross Domestic Product - GDP)

Merely the sum of everything the country produces:

$$GDP(Y) = \Pr_{agriculture} + \Pr_{oil,\ gas,\ etc} + \Pr_{industry} + \Pr_{services} \ldots\ldots [1]$$

But TOTAL GDP (value-added) in the poor countries in which INICEF is mainly interested is very small

- $580 on average
- Equivalent to ONLY 2% of that of High-Income Countries
- So for the SAME percentage utilisation of GDP on Children (education, health care etc) the Poor Country gets on average only 2% of what a High-Income country would get.

# GDP divided by Population gives an indication of country prosperity

**Absolute Numbers**

| | No. of Countries | No. of People (million) | **Total GDP- ER basis ($US billion)** | **Per capita GDP - ER basis ($US)** |
|---|---|---|---|---|
| **Low Income** | **59** | **2,353** | **1,363** | **580** |
| **Lower Middle-Income** | **54** | **2,475** | **4,878** | **1,918** |
| Upper Middle-Income | 40 | 599 | **3,579** | **5,625** |
| High Income | 56 | 1,011 | **34,524** | **35,131** |
| (of which OECD Members) | 24 | | | |
| TOTAL - WORLD | 209 | 6,438 | **44,318** | **6,987** |

# An Example for One Low Income Country - Uganda - GDP by sector *(% of GDP in constant prices)*

| | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|
| Agriculture,forestry, fishing (ISIC A-B) | 24.6 | 25.5 | 24.0 | 22.1 | 23.9 |
| Mining, Manufacturing, Utilities (ISIC C-E) | 11.4 | 11.5 | 11.8 | 12.6 | 12.0 |
| of which Manufacturing (ISIC D) | 7.4 | 7.3 | 7.4 | 7.5 | 7.4 |
| Construction (ISIC F) | 12.7 | 12.8 | 11.9 | 12.7 | 12.5 |
| Wholesale, retail trade, restaurants and hotels (ISIC G-H | 17.8 | 17.8 | 18.8 | 19.5 | 18.7 |
| Transport, storage and communication (ISIC I) | 5.5 | 5.5 | 6.4 | 6.7 | 6.2 |
| Other Activities (ISIC J-P) | 28.0 | 26.8 | 27.1 | 26.4 | 26.7 |
| **TOTAL** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |

**Note that the "Other" activities listed above can include a significant contribution from Education, Health and other Social services as a SOURCE of incomes (see Notes pages)**

Source: UN Statistical Office – electronic database.

# and a slightly higher income Country – Egypt *(% of GDP in constant prices)*

| | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Agriculture, forestry, fishing (ISIC A-B) | 14.9 | 14.6 | 14.7 | 14.7 |
| Mining, Manufacturing, Utilities (ISIC C-E) | 30.8 | 32.3 | 31.4 | 31.5 |
| Construction (ISIC F) | 3.8 | 3.8 | 3.8 | 3.8 |
| Wholesale, retail trade, restaurants and h | 13.4 | 13.4 | 13.5 | 13.4 |
| Transport, storage and communication (IS | 10.2 | 9.2 | 9.4 | 9.6 |
| Other Activities (ISIC J-P) | 26.9 | 26.6 | 27.2 | 26.9 |
| | | | | |
| **TOTALs** | **100.0** | **100.0** | **100.0** | **100.0** |

**Note; the smaller share for Agriculture and the larger share for Mining and Manufacturing but similar share for Other Activities**

Source: UN Statistical Office – electronic database

# Uganda – National Expenditures – how was GDP Used?

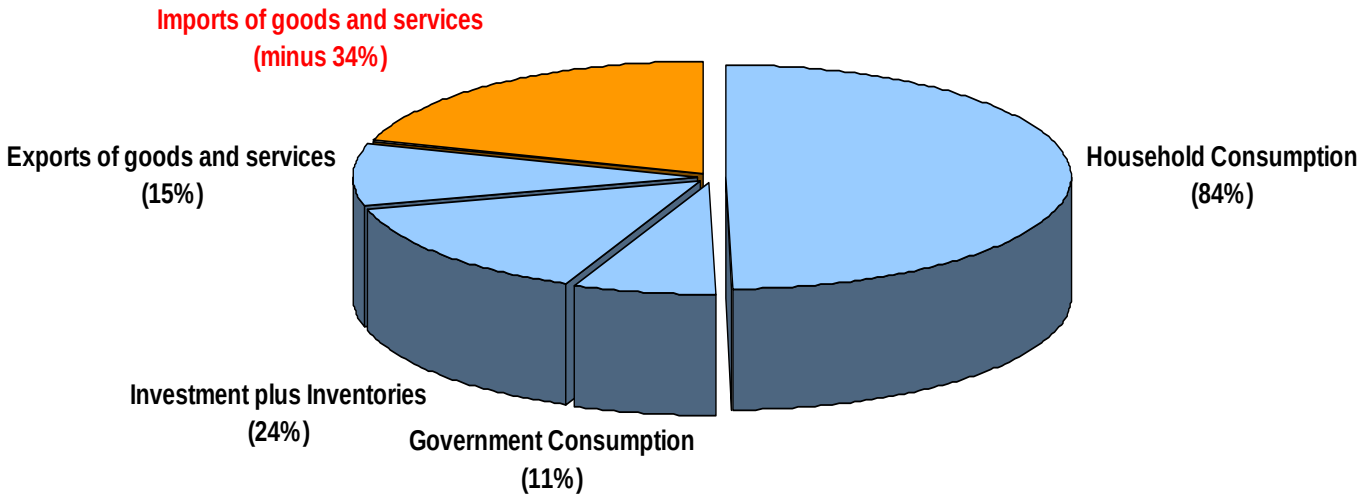
***(%age shares of GDP)***

| | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|
| Final consumption expenditure | 89.1 | 88.5 | 93.4 | 92.3 | 94.7 |
| *of which Household Consumption* | *74.6* | *74.9* | *80.0* | *80.4* | *83.6* |
| *of which Government Consumption* | *14.5* | *13.7* | *13.4* | *11.9* | *11.1* |
| Investment plus Inventories (incl Govt Inv.) | 21.7 | 21.6 | 20.7 | 22.6 | 24.1 |
| Exports of goods and services | 13.4 | 15.2 | 14.9 | 16.1 | 15.0 |
| Imports of goods and services | 24.2 | 25.3 | 29.0 | 31.1 | 33.9 |
| **TOTALS** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |

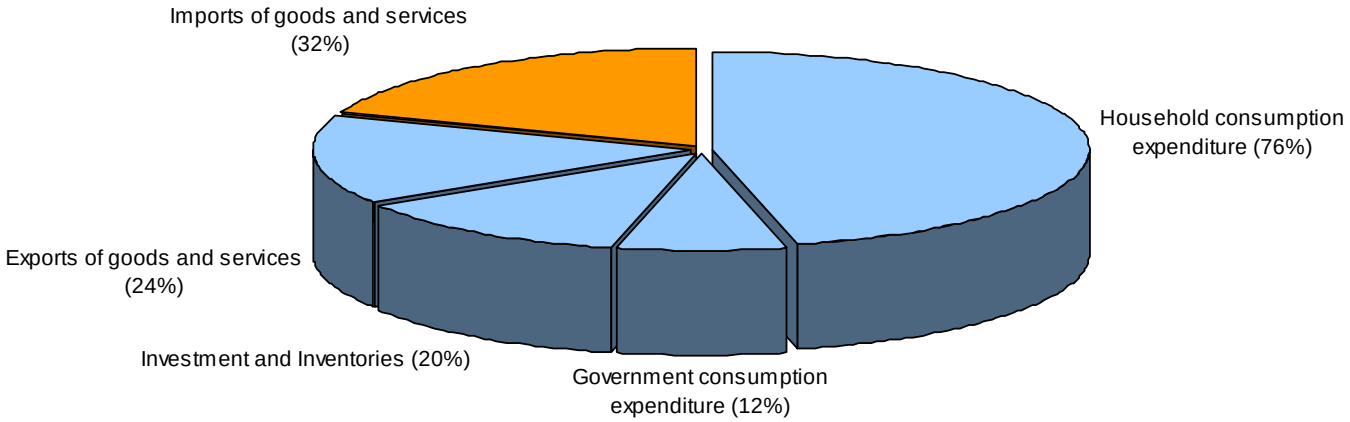
$$GDP(Y) = \text{Consumption Private}\,(C_{pr}) + \text{Consumption Govt.}(Cg) + \text{Investment}\,(I) + \text{Exports}\,(X)\ \text{net of Imports}(M).....[3]$$

Source: UNSO

# How Did Uganda USE Total Production in 2008?



# How Did Egypt USE Total Production in 2008?




Similar in some ways to Uganda but note the much smaller Import deficit (8% versus 19%)

# Financing Gap ONE - The External (Current) Balance (CAB) - Uganda

A CAB deficit implies (BY DEFINITION) that consumption and investment together are greater than production. So in UGANDA

| | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|
| | | | | | |
| **TOTALGDP** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |
| minus Household Consumption | 74.6 | 74.9 | 80.0 | 80.4 | 83.6 |
| minus Government Consumption | 14.5 | 13.7 | 13.4 | 11.9 | 11.1 |
| minus Investment | 21.7 | 21.6 | 20.7 | 22.6 | 24.1 |
| **Equals** | | | | | |
| **Exports less Imports (the CAB)** | **-10.8** | **-10.1** | **-14.1** | **-15.0** | **-18.9** |

Notice that **Uganda's** TOTAL Consumption is extremely high relative to its TOTAL Production and has been rising since 2005. So much of its new investment spending in recent years has come – in effect - from running a **growing** External Deficit (which has to be financed)

# Financing Gap TWO - The Savings: Investment Gap - Uganda

National Savings (*S*) are defined as total production less total consumption (private and public)

| | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|
| | | | | | |
| **TOTALGDP** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |
| minus Household Consumption | 74.6 | 74.9 | 80.0 | 80.4 | 83.6 |
| minus Government Consumption | 14.5 | 13.7 | 13.4 | 11.9 | 11.1 |
| **Equals** | | | | | |
| **Total SAVINGS (Households plus Government)** | **10.9** | **11.5** | **6.6** | **7.7** | **5.2** |
| *Note also that:* | | | | | |
| Exports less Imports (i.e the CAB) | -10.8 | -10.1 | -14.1 | -15.0 | -18.9 |
| plus Investment | 21.7 | 21.6 | 20.7 | 22.6 | 24.1 |
| **also equals Total Savings** | **10.9** | **11.5** | **6.6** | **7.7** | **5.2** |

Because SAVINGS in **Uganda** are relatively low (5% of GDP), we see again that INVESTMENT (in schools, roads etc but also in the productive economy) relies in heavily on the use of savings from abroad – the CAB

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# Topic 2: Let's VERY Briefly Explore Prices

**In a closed economy** – one with no foreign trade, the price level will largely depend on the behaviour of (i) wages and (ii) labour productivity.

**WHY?**

The Notes provide a fuller answer just for those who need it. But in BRIEF and by numerical example:

- If GDP (Y) and the labour force (L) were both rising at the same rate (say 5%) then labour productivity would NOT be changing and prices would rise broadly in line with average wage rates.
- for example, an 8% wage increase would likely cause prices also to rise by about 8% (no increase in REAL incomes)
- But if Y grew at 5% versus only 3% for L then labour productivity would be rising at 2% and wage incomes could rise by that 2% WITHOUT giving rise to any price rises. So an 8% wage increase could result in only a 6% increase in prices and there would be a 2% gain in the REAL incomes

# Prices in the Open Economy

In the case where the economy trades internationally and acquires a significant part of its total supplies as Imports (e.g. oil, other imported raw materials or consumer goods such as food and medicines), then the prices of these must also impact the domestic price level.

Now the price level has a DOMESTIC component driven by wage rate changes and an IMPORTED component driven by foreign prices and MOST IMPORTANT by the Exchange Rate. :

So if the imports (of basic materials such as oil or consumer goods such as food) are large then changes in international prices of these items AND/OR  our exchange rate (e.g. the numbers of pesos we pay for each dollar) can have an important additional influence on prices and inflation.

# The Nominal Exchange Rate and the Poverty agenda

- Partly because of the logic from the previous slide many low and middle - income country governments have shown a traditional preference for **Fixed** Exchange Rates.
- A fixed Exchange Rate may help protect (poor) people from one source of higher prices
- But it can be disastrous IF the domestic influences on prices are such as to push up **domestic prices** very fast – See next slide

- **REASON. Poor people often CONSUME mainly domestic goods but partly PRODUCE goods that depend on the prices made possible by the INTERNATIONALLY Traded element of prices**

# Example of a (fixed) ER Disaster - Ghana in the 1970s (stylised)

| | *1974* | *1976* | *1978* | *1980* |
|---|---|---|---|---|
| | | | | |
| Cocoa Price $ per tonnne | 100 | 100 | 100 | 100 |
| Exchange Rate (cedi per $) | 1.15 | 1.15 | 1.15 | 2.75 |
| Price to famers in cedi | 115 | 115 | 115 | 275 |
| Cost in Cedi | 45 | | | |
| Inflation Index | 100 | 156 | 336.96 | 505.44 |
| Cost in Cedi | 45 | 70.2 | 151.632 | 227.448 |
| | | | | |
| Profit per tonne in cedi | 70 | 44.8 | -36.632 | 47.552 |

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# FOUR
# Macro Instability and the Global Crisis

# Group Assignments

1 What do you understand by Macroeconomic "Instability"?

ANSWER – it comprises some of….

2. Why should UNICEF be concerned about Macroeconomic Instability – why might it dis-proportionately hurt the poor?

ANSWERS include…….

TIP – think of the problems that have been caused to people in countries known to you by the recent global crisis and recession

# How the Current Global Crisis has affected Growth Prospects in AFRICA (data for 2009 and 2010 are IMF projections)

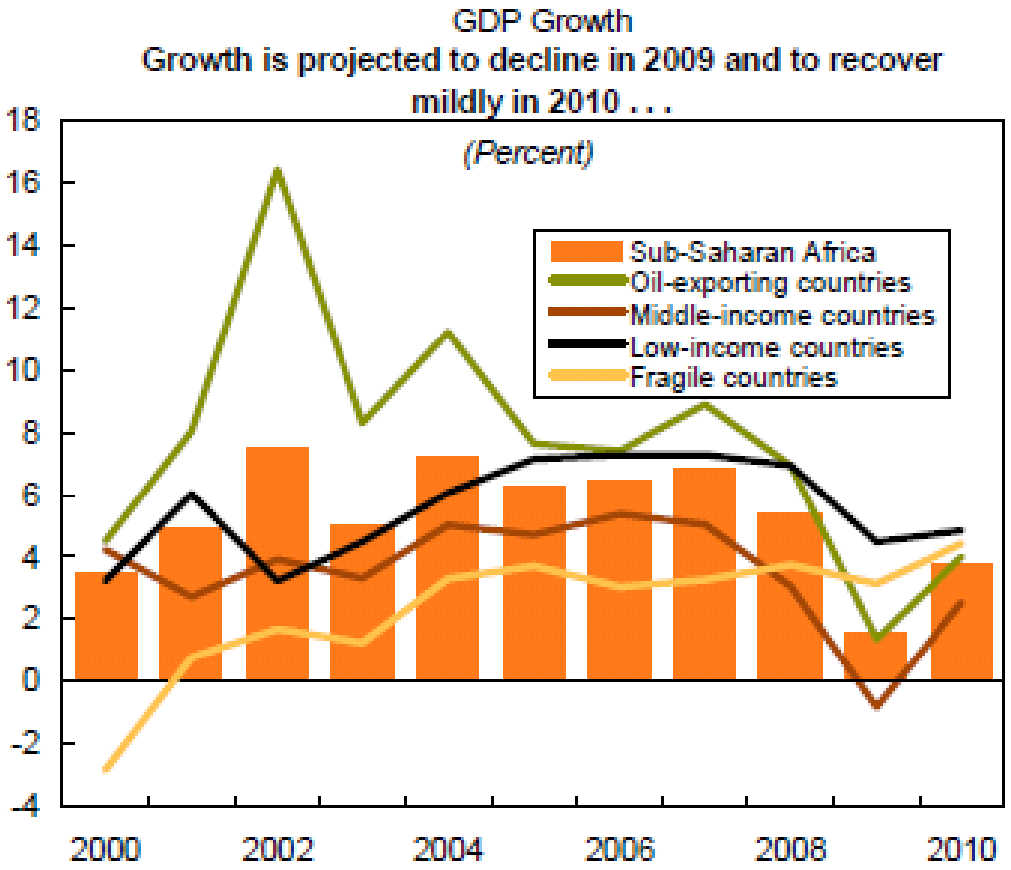
| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|
| Low-income countries | 4.5 | 4.8 | 4.7 | 4.4 | 2.0 | 2.4 |
| Benin | 0.0 | 0.8 | 1.4 | 1.7 | 0.6 | -0.2 |
| Burkina Faso | 4.6 | 3.1 | 1.3 | 2.6 | 1.2 | 1.7 |
| Ethiopia | 9.6 | 8.5 | 8.4 | 8.8 | 3.8 | 4.0 |
| Ghana | 3.2 | 3.8 | 3.5 | 4.5 | 1.9 | 2.1 |
| Kenya | 3.9 | 4.5 | 5.1 | 0.2 | 1.2 | 2.2 |
| Madagascar | 1.8 | 2.2 | 3.4 | 2.3 | -2.8 | -0.6 |
| Malawi | 1.2 | 4.6 | 6.5 | 7.5 | 4.8 | 3.9 |
| Mali | 3.7 | 2.9 | 2.0 | 2.6 | 1.5 | 1.8 |
| Mozambique | 6.3 | 6.6 | 4.9 | 4.1 | 2.3 | 2.0 |
| Niger | 5.2 | 2.6 | 0.2 | 6.2 | -0.1 | 1.4 |
| Rwanda | 5.4 | 5.4 | 5.7 | 8.9 | 3.4 | 3.6 |
| Senegal | 3.2 | 0.0 | 2.3 | 0.1 | 0.7 | 1.0 |
| Tanzania | 5.1 | 4.8 | 5.0 | 5.4 | 2.9 | 3.6 |
| Uganda | 2.7 | 6.9 | 4.8 | 5.7 | 2.5 | 1.8 |
| Zambia | 2.8 | 3.8 | 3.8 | 3.5 | 1.6 | 2.1 |

**Note:**

**The large % age decline in several countries e.g. Ethiopia and Mozambique**

# How the Current Global Crisis has affected Growth Prospects in Africa more generally

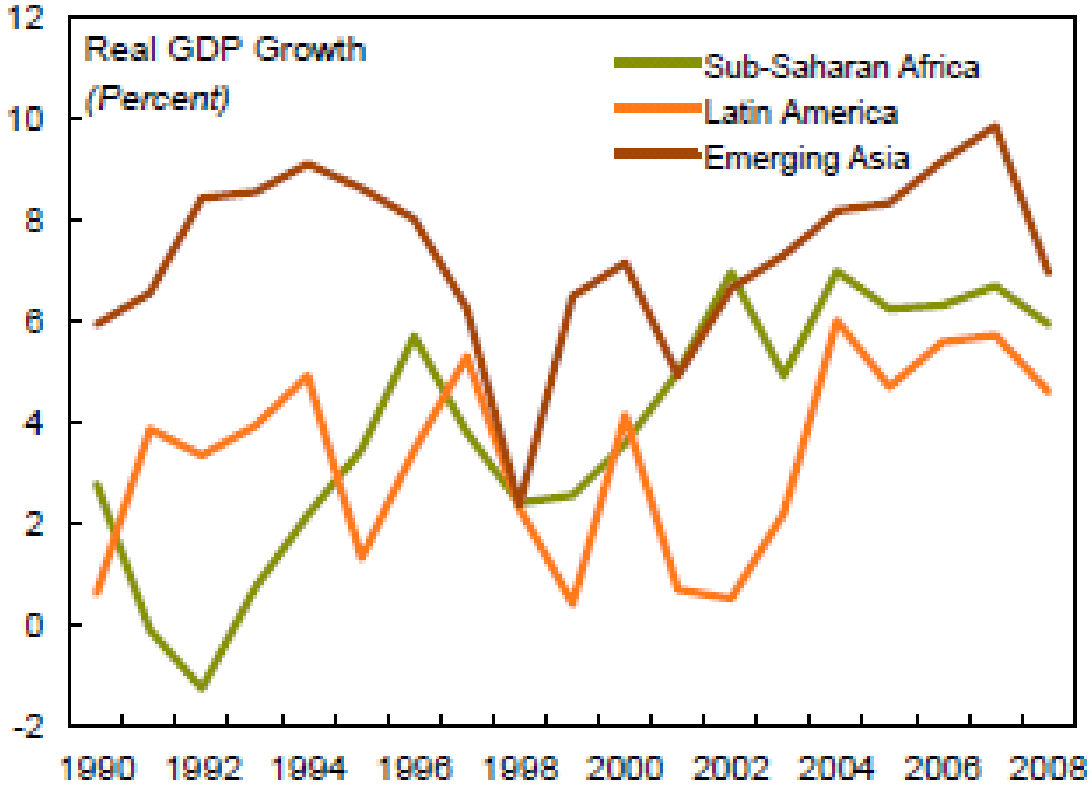
Note: Some instability but effects overall are muted relative to some other regions of the world (see next slide)




Source: IMF, World Economic Outlook Database, October 2009

## Figure 1.2. A Comparison of Growth

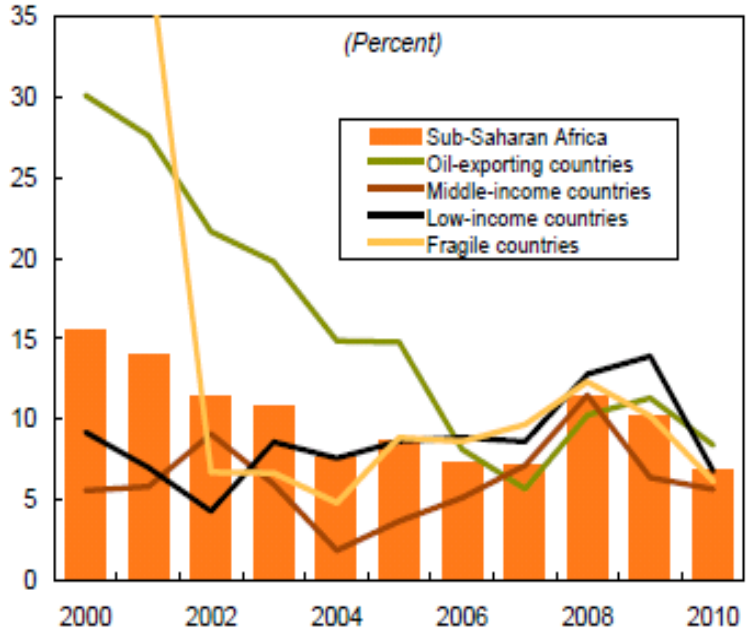
**Growth in Africa has slowed more gradually than in other regions.**



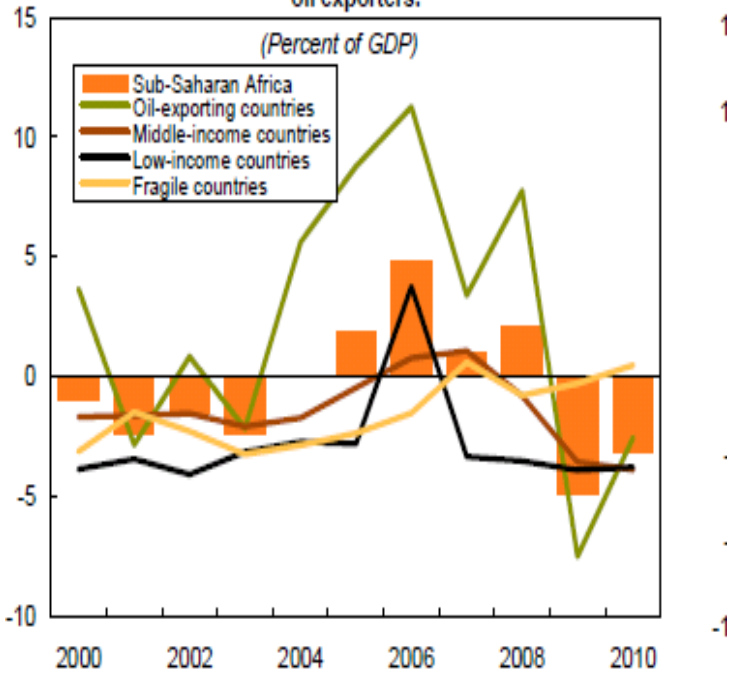

Sources: IMF, *World Economic Outlook*; and IMF, African Department database.

# But note significant inter-country variations in some aspects of Macro outcomes through the crisis period

Inflation
. . . and inflation to fall in most countries.



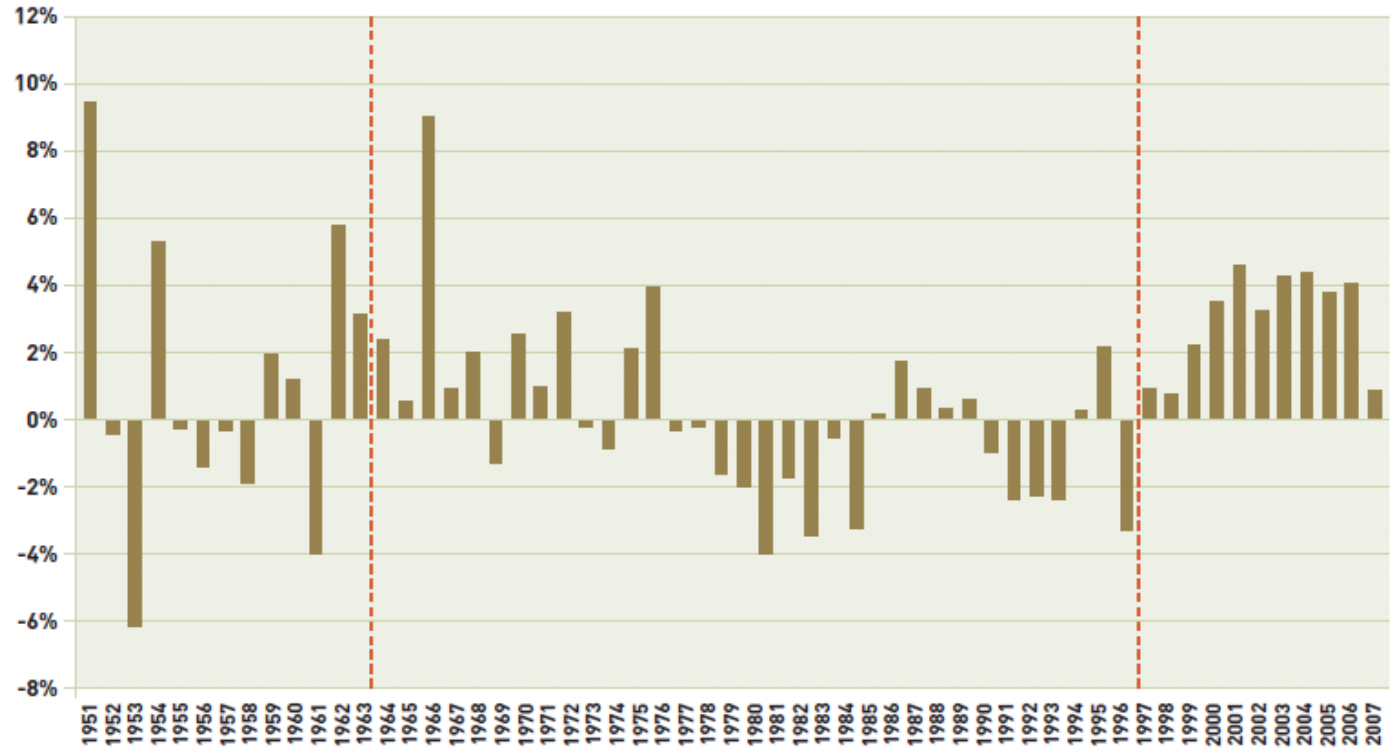

Central Government Overall Fiscal Balances
Fiscal balances in the region will deteriorate, particularly among oil exporters.




Sources: IMF, *World Economic Outlook;* and IMF, African Department database.

# And the instability of Growth Rates over longer periods of time - per capita GDP in Tanzania – 1950 to 2003 (in 1990 prices)

Figure 3.4: Growth rates of GDP per capita 1951 to 2007




*Source: University of Groningen Growth and Development Centre*

# Sources of Macro Instability (1)
# The Balance of Payments

In order to see how the Twin deficits fit together with other parts of the macro-economy to cause instability, we first need to disaggregate a few of the aggregates already examined in Topic 1

This is done for the GOVERNMENT sector, the PRIVATE sector and the BALANCE OF PAYMENTS ("Foreign Sector") using some simple algebra in the next slide

**We want to focus mainly in the GOVERNMENT balance (row 1 and column 2) since this is our link to anti-poverty and other social expenditures and the constraints on these.**

# Dividing Savings into its Private and Government Components

$Y \equiv C + I + G + (X - M)$, *where* $Y = GDP$

Now subtract TAXES from both sides

$$Y - T \equiv C + I + (G - T) + (X - M) \ldots$$

Now the term in red is the government budget deficit (negative savings).

But ***Y-T-C*** is the SAVINGS of the private sector after deducting taxes and household consumption spending (call this ***Sp***)

Then after some slight re-arranging of the terms we have:

$(Sp - I) \equiv (G - T) + (X - M)$ OR

$$(Sp - I) + (T - G) \equiv (X - M)$$

Message HIGH private savings relative to private investment and/or a budget surplus results in a CAB surplus. The opposite results in deficit

# A Numerical Example

Using the same data sources presented earlier, an estimate of the (partial) Flow of Funds matrix for **Uganda** in 2008 (with numbers expressed as % ages of GDP) is as follows:

| *%ages of GDP* | Private Sector | Government | Foreign | TOTALS |
|---|---|---|---|---|
| | (firms and people) | (including state firms) | govt, firms, people) | |
| Goods and Services | 16.7% (net use of funds) | 2.1 % (net use of funds incl grants) | 18.8% (source of funds) | Zero |
| | | | | |
| | *matched by:* | *financed by:* | *financed by:* | |
| | | | | |
| Non-Monetary Assets | Remittances - Purchase Financial A | Borrowing via Bonds etc | Grants and Loans | **Zero** |
| | *and* | *and* | *and* | |
| Monetary Assets | Change in Money Balances | Borrowing via Money Cr | Foreign Reserves | **Zero** |
| | | | | |
| **TOTALS** | **Zero** | **Zero** | **Zero** | |

**Note here the critical importance of the fiscal budget deficit for the overall EXTERNAL (CAB) deficit**

# Components of the BoP

The previous slide shows (in Col 3) – the THREE components of the BoP. Note that these must always sum to zero.

These components are:

- The Current Account
- The Capital Account (Non-Monetary)
- The Monetary or Reserves Account

Note also from row 1 of the previous slide (and the algebra) that:

- high Government expenditure relative to tax revenues (resulting in the budget deficit of 7.8 % of GDP) has a direct impact on the size of **Egypt's** BoP current deficit and so on the EXTERNAL borrowing that the county needs to make
- The budget deficit does NOT JUST affect the need for the government to raise money to finance its OWN deficit.

# Adjusting a BoP Deficit – a major cause of unstable livelihoods

ANY country that persistently runs a large Current A/C deficit (X-M adjusted for the other current flows such as foreign aid) would NORMALLY HAVE TO ADJUST through a combination of policies to:

- **Deflate** incomes (via tighter fiscal and monetary policies or direct income restraints) to reduce the imports consumed or used for investment. This is called the *Expenditure Reduction* approach.
- **Switch** a part of total demand away from C+I+G and into exports (via exchange rate devaluation, direct subsidies) to make possible increased export earnings. This is referred to as the *Expenditure Switching* approach.

***In practice both approaches will harm living standards and for this reason governments are frequently reluctant to make the adjustments (at all) or they adopt them with insufficient commitment.***

# Avoiding the adjustment

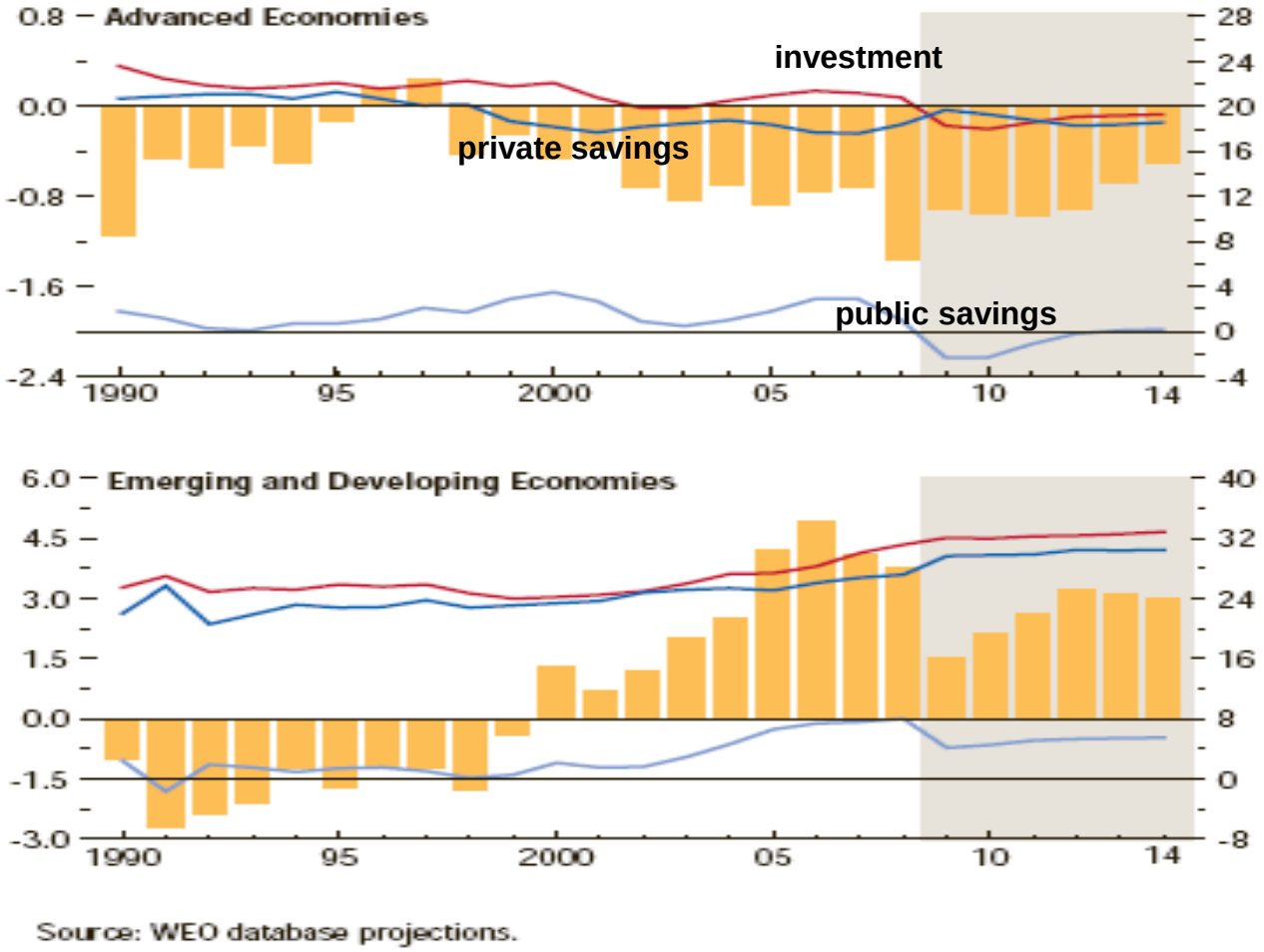
The adding up constraint that comes from the matrix in Slide 35 makes it clear that a deficit in the Current Account can be sustained over time IF a country can call on a SUSTAINABLE flow of capital into the economy (i.e., the Capital Account is in sustainable surplus).

The real problem for policy is knowing what is or is not SUSTAINABLE

**Examples:**

- Developing countries as a whole in the period 1973 to 1981 were able to avoid the large BoP adjustment necessitated by much higher oil prices because they were able to borrow large amounts of so-called petro-dollars through Western banks. But this was not SUSTAINABLE – in 1982 when Mexico defaulted on her debt, the flows dried up and many developing countries needed to make the BoP adjustments that had been avoided until that date.
- The USA has for many years been running huge Current A/C deficits (now >5% of GDP) but has also been able to borrow heavily from countries like Japan and China who are prepared to buy US Treasury and other securities (so far!). **THIS SITUATION WORSENED AFTER 2000**
- **Compare: Thailand, Korea and Mexico in the 1990s.**

# Global Current Accounts, Investment and Savings (% of World GDP) Source WEO April 2009




Source: WEO database projections.

# The Changing Composition of HIPC Debt

***Source: W. Easterly in World Development, 2002***

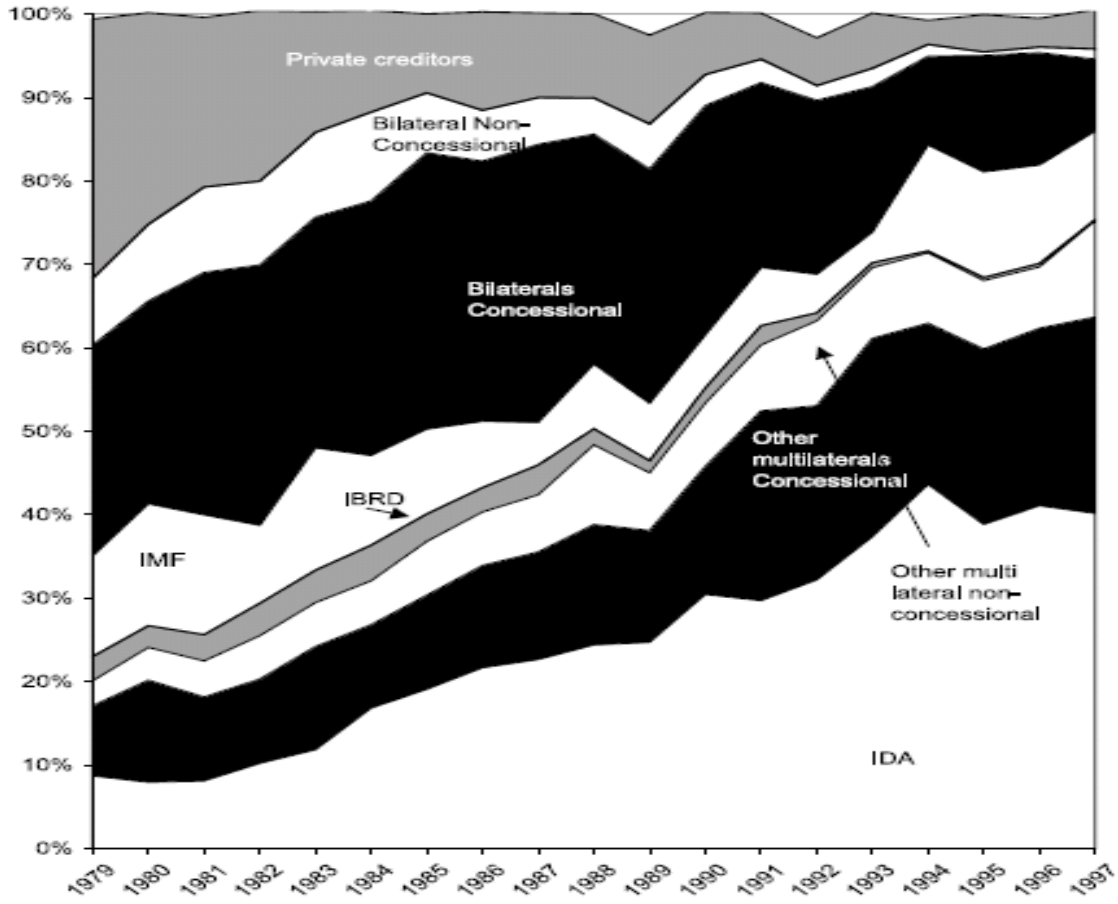



Figure 5. *Composition of gross disbursements to HIPCs.*

# Sources of Instability (2) The Fiscal Deficit

There are various alternative views of the "fiscal deficit":

The conventional (IMF - GFS) definition is:

- *Overall Deficit/Surplus = (Revenue (taxes and fees) + Grants) – (Expenditures (current and capital) + Lending net of repayments) – on an accrual basis.*
- The *Primary Deficit/Surplus* is the same except that Expenditures are measured by excluding all interest payments on debt to get a truer picture of the benefits to the economy coming form public spending. Low-income countries that have significant debt problems (either domestic debt or international debt) can easily have an Overall Deficit much larger than the Primary Deficit (e.g. Kenya in 1993)

*The other main variants are:*

- A CASH or a COMMITMENTS basis for measuring expenditures or receipts?
- Include or exclude foreign grants?

# Uganda: Fiscal Balances through the Crisis (% of GDP)

| | 2007/08 | 2008/09 | | 2009/10 | | 2010/11 | 2011/12 | 2012/13 | 2013/14 |
|---|---|---|---|---|---|---|---|---|---|
| | Actual | Fifth Review | Est. | Fifth Review | Proj. | Proj. | Proj. | Proj. | Proj. |
| | | | | (Percent of GDP) | | | | | |
| Total revenue and grants | 15.5 | 15.7 | 15.2 | 15.3 | 15.4 | 15.4 | 15.6 | 16.2 | 16.7 |
| Revenue | 12.8 | 12.4 | 12.5 | 12.3 | 12.8 | 13.2 | 13.7 | 14.2 | 14.7 |
| Grants | 2.7 | 3.2 | 2.6 | 3.0 | 2.6 | 2.2 | 2.0 | 2.0 | 2.0 |
| Budget support | 1.9 | 1.7 | 1.8 | 1.4 | 1.4 | 1.2 | 1.2 | 1.1 | 1.0 |
| Project grants | 0.8 | 1.5 | 0.9 | 1.6 | 1.1 | 1.0 | 0.8 | 0.9 | 1.0 |
| Expenditures and net lending | 17.9 | 19.4 | 16.9 | 19.1 | 17.8 | 19.2 | 19.2 | 19.2 | 19.3 |
| Current expenditures | 11.8 | 10.7 | 10.7 | 10.2 | 10.3 | 10.5 | 10.4 | 10.6 | 10.7 |
| Wages and salaries | 4.5 | 3.9 | 3.9 | 3.9 | 3.6 | 3.8 | 3.8 | 3.8 | 3.8 |
| Interest payments | 1.3 | 1.2 | 0.9 | 1.1 | 1.0 | 1.0 | 0.9 | 0.8 | 0.8 |
| Other current | 6.0 | 5.5 | 5.8 | 5.3 | 5.7 | 5.7 | 5.8 | 5.9 | 6.1 |
| Development expenditures | 5.6 | 7.7 | 5.5 | 8.6 | 7.2 | 8.4 | 8.5 | 8.5 | 8.5 |
| Overall balance | | | | | | | | | |
| Including grants | -2.4 | -3.7 | -1.7 | -3.9 | -2.5 | -3.8 | -3.6 | -3.1 | -2.6 |
| Excluding grants | -5.1 | -7.0 | -4.4 | -6.9 | -5.0 | -6.0 | -5.5 | -5.0 | -4.6 |

Source: *IMF, 6th Review of the Uganda Policy Support Instruments Program, January 2010*

# Group Assignments

Why do Fiscal (Budgetary) Deficits Matter?

TIP. Answer 1 is linked to METHODS of financing the deficits

TIP. Answer 2 is linked to the consequences of printing money as a means of finance

Other Answers are welcome.

# Agenda

1. The Meaning of Fiscal Space
2. The Macro Aggregates - understanding the components of GDP
3. Introducing the Price Level – wages and exchange rates
4. Explaining why poor countries face such pressures and macro INSTABILITY from – the Balance of Payments (BOP) and Fiscal deficits
5. Financing limits on Fiscal Deficits

# Topic 4: How are Deficits Financed?

There are always THREE main ways to finance a deficit:
:

1.Printing Money – i.e. an enforced credit creation where the funds flow to the government (via borrowing from Central Bank)

2.Voluntary DOMESTIC Borrowing

3.INTERNATIONAL Borrowing

And 4. a Fourth Messy way – INVOLUNTARY Borrowing - arrears, non-payment of bills, forced sales of government securities on local banks etc

**We next consider the limits of each of these methods in turn**

# Further Explanations:

Some of you may welcome more fully argued explanations of what follows next. These explanations can be found in the *Notes Pages* together with some algebraic explanations of the propositions on slides 49-57 inclusive

# Method 1: "Printing" Money – the Constraints

Let us establish **TWO** very important propositions:

1. The authorities can only successfully finance their deficits by printing more money **IF** the public are willing to hold higher money balances. If the authorities print MORE money than the public wish to hold then the surplus money will quickly dissipate in an attempt to buy goods including imported goods. This will have a direct *positive* effect on domestic inflation and/or a *negative* effect on the BoP and the level of foreign reserves.
2. The public's willingness to hold money is dependent on factors such as income level (Y), prices (P) and interest rates ( indicating the attractiveness of non-money assets). But it is also critically dependent on previous experience (e.g. if recent experience as in Zimbabwe indicates that prices will rise very rapidly then NO ONE will voluntarily hold extra units of domestic money when it is put into circulation).

# How Much Inflation might be required?

To answer this question – in the more general case - consider (realistically) TWO elements in the public's demand to hold money

Specifically:

❖ a stable element the defines normal conditions and a normal willingness to hold money (call this $1/\alpha$ *…e.g. $1/\alpha = 1$ or 100% is a high value that is achieved in very stable economies*

❖ an element that reflects people's well known tendency to reduce their money holdings as inflation rises higher and higher – e.g. as in Zimbabwe today (call this $\beta$).

# Numerical Example *(Y growth = 1% and the fiscal deficit (g) = 5% of GDP, β = zero initially (last row) but rises with inflation , inflation rate required = π,*

*Beta gradually rising*

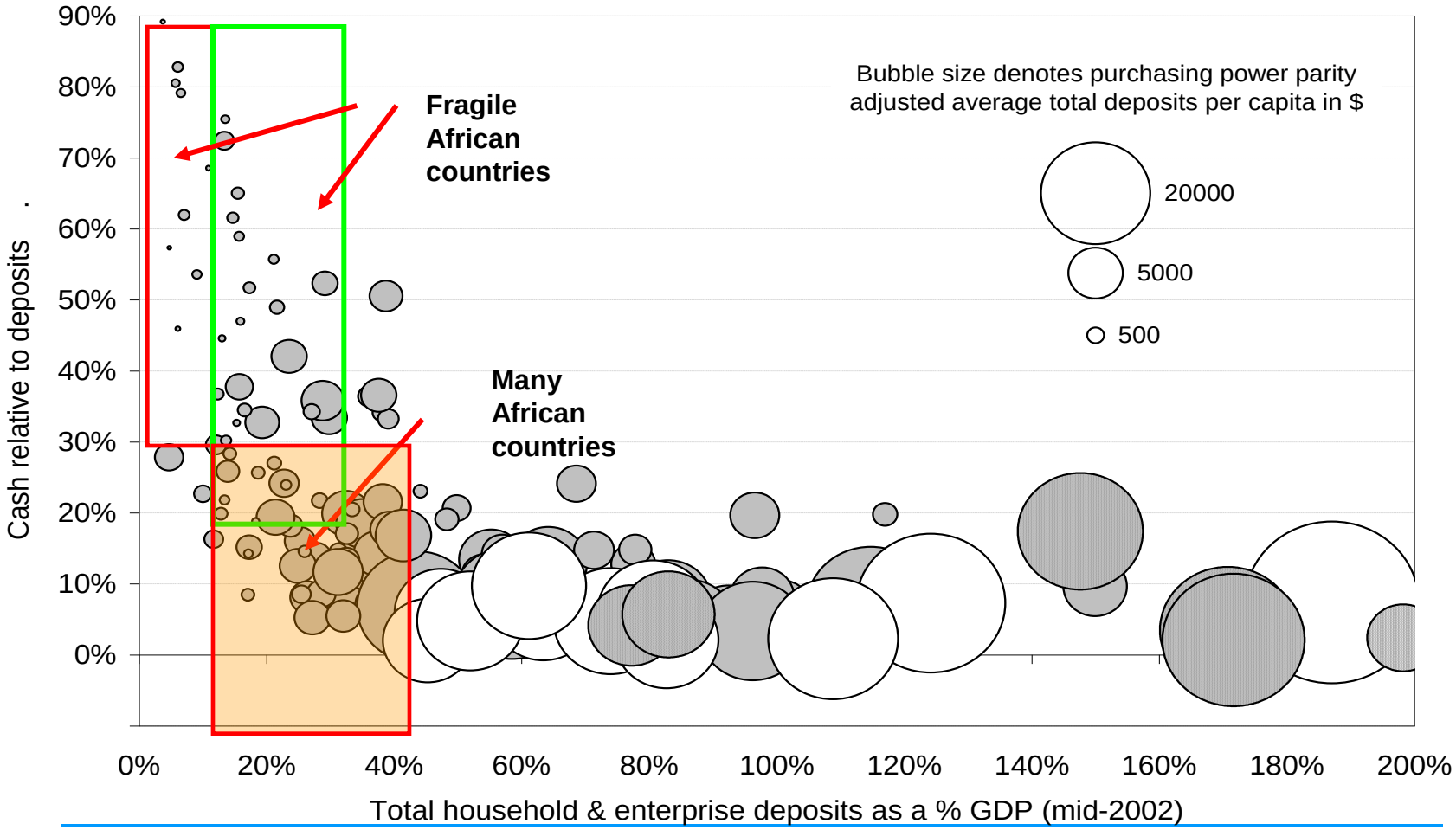
| 1/α | α | β | g | y | π | Monetary depth- Eq [9] |
|---|---|---|---|---|---|---|
| 0.05 | 20.00 | 15 | 0.05 | 0.01 | 396.0% | 1.3% |
| 0.15 | 6.67 | 9 | 0.05 | 0.01 | 58.8% | 8.4% |
| 0.2 | 5.00 | 8 | 0.05 | 0.01 | 40.0% | 12.2% |
| 0.3 | 3.33 | 6 | 0.05 | 0.01 | 22.4% | 21.4% |
| 0.35 | 2.86 | 5 | 0.05 | 0.01 | 17.7% | 26.7% |
| 0.45 | 2.22 | 3 | 0.05 | 0.01 | 11.9% | 38.8% |
| 0.5 | 2.00 | 2 | 0.05 | 0.01 | 10.0% | 45.5% |
| 0.6 | 1.67 | 0.5 | 0.05 | 0.01 | 7.5% | 58.7% |
| 1 | 1.00 | 0 | 0.05 | 0.01 | 4.0% | 100.0% |

Uganda is somewhere here

Egypt is here somewhere

Notice how even a (low) 5% deficit can promote seriously high inflation when the β value is high and combines with an already low degree of (normal) monetary depth (column 1). Most countries of concern to us are in the0.1 - 0.2 range in column (1) – see next slide.

# Most low-income countries have very low levels of financial depth (values for 1/α)



# Method 2: Local Borrowing – the Constraints

For any any given level of the PRIMARY Deficit (i.e. the deficit ignoring interest payments), increased use of local borrowing today results in lower inflation ($\pi$) today but also to a larger overall deficit in future *see Notes pages for the algebraic logic.*

There are TWO main constraints on such borrowing:

1.Local financial markets (banks, insurance companies etc) are typically very SMALL - so there is little capacity to absorb (buy) new government debt issues:

2.The demand to buy government debt in those markets is typically unresponsive to higher interest rates. So quite HIGH interest rates may be needed to sell a relatively moderate volume of new government debt.

# How do the Constraints work out in practice?

❖ IF the (real) interest rate accruing on government debt EXCEEDS the growth rate of government revenues, the ***ratio*** of debt service to total government revenues) will rise. Such an inequality cannot persist

❖ But note that attempts to issue significantly large amounts of debt confronts point 2 (previous slide) to increase the likelihood that the volume of debt will rise uncontrollably by pushing the interest rates ABOVE the rate of growth of revenues.

❖ Low and middle income countries have frequently exceeded both their domestic and their external borrowing capacities and so have achieved some short-term help for the financing of fiscal deficits – ***and lower inflation*** - only at the expense of more difficult problems of this type at a later stage.

Note the example of Kenya in 1991-1992 when interest rates were liberalised (temporarily) as an to illustration of these very real problems (next slide)

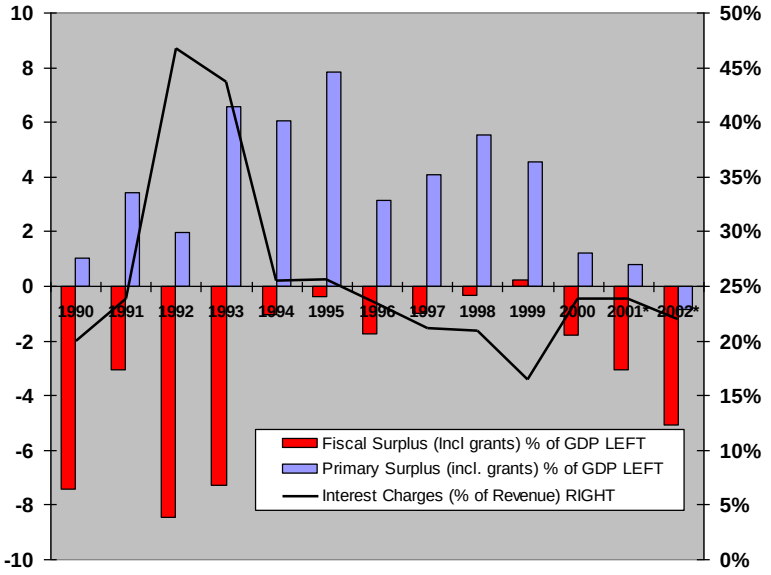
# An Example of seriously Unsustainable LOCAL Borrowing: Kenya in 1992/93 also East Asia after 1996

In this case when the authorities liberalised the financial markets in 1991/92, government interest payments (mainly on domestic debt) became very large in spite of a reasonably healthy *primary* budget position.

In essence these interest charges increased much faster than the growth of the budget revenues that were needed to pay the interest charges

So they quickly came to represent an unsustainably high proportion of such revenues.

Chart 2: Kenya - Fiscal Balances and Interest Payments



# Method 3: Foreign Borrowing – the Constraints

If YOU personally, a COUNTRY or a GOVERNMENT is going to borrow money, the amount that you (they) can SUSTAINABLY borrow will depend on two things namely:

- the interest rate (in real – inflation adjusted - terms) that is charged while the loan is outstanding ($r$-$\pi$), i.e. how many real resources (such as potential food imports or new school buildings) do you have to give up to pay your debt charges? and
- the rate at which the income stream that will be used to repay the debt is increasing also in real-inflation adjusted terms ($Y_{gr}$). i.e. how rapidly are your available real resources (e.g. to buy food imports or to build new schools rising?).

For ***fiscal (budget)*** financing the relevant $Y_{gr}$ will be the growth of Government Revenues including grants. For ***external (BoP)*** borrowing the relevant $Y_{gr}$ term will be the growth of Export Earnings and associated foreign currency incomes (such as Remittances).

# Consider some of the Trade-Offs that arise - examples

- A highly indebted country decides to reduce debt by running a significant BOP surplus. But the fiscal austerity to achieve this surplus drastically reduces the growth rate of GDP and this worsens the countries debt ratio Example: Latin America in the 1980s

- Instead the BOP and debt ratio improvement is sought by using a real exchange rate devaluation to boost growth through improved export earnings. This may work (Korea in the 1980s) but also creates a negative feedback effect on the debt ratio. So IF the export gain FAILS to materialise, this policy is very damaging for debt.

- The authorities try to boost growth by simply spending more government resources on local goods and services. This may help the debt ratio via point 2 on the previous slide but only at the cost of a larger volume of new borrowing (and inflation) that is needed to finance the larger fiscal and BOP deficits.

# Method Four – Messy Finance of Deficits

A few examples:

1. Government fails to pay suppliers and so builds up local arrears of payment
2. Government forces banks to “invest” in low or zero yielding government securities
3. Government allows state enterprises (e.g. power companies) to charge excessively low prices but then fails to provide funds to cover the resulting losses
4. Government fails to pay over the contributions to Pension Funds that are deducted from civil service pay
5. Government maintains a dual exchange rate and requires some exporters to surrender foreign exchange at the more overvalued of the two rates for use in government purchasing

# Main Points from Topic 4

1. Governments with small/weak financial systems and a Fixed Exchange Rate, will find that attempts to use monetary financing of deficits will lead quickly to a significant decline in foreign reserves
2. Governments but with a Flexible Exchange Rate – like Egypt - can use monetary financing of deficits but the inflation costs can be high especially where (i) the normal level of money holdings relative to GDP is low and (ii) where the public reduce money holdings rapidly in response to rising inflation (e.g. Zimbabwe before dollarisation)
3. In practice these two cases may not be that much different in practice since ***unofficial*** (black market) exchange rate movements will quickly follow in response to high inflation (e.g..Zaire/DRC).
4. Both domestic borrowing and external borrowing can mitigate the problems BUT (i) voluntary domestic borrowing for governments is frequently very low and (ii) both domestic and external borrowing involve interest costs that may rapidly increase the overall fiscal deficit – which itself has to be financed.
5. "Messy " finance offers an escape route but creates a whole set of problems of its own

**SO THERE IS VERY RARELY A FREE LUNCH!**

# Group Assignment - Time Permitting

A low middle-income developing country with basically sound policies and a strong commitment to poverty reduction faces an increased BoP deficit because of a sudden fall in its export earnings for its main exports namely cotton and coffee. The country can borrow more to finance this extra deficit but knows that it is already close to its sustainable debt limits.

So it is considering (i) an ER devaluation to try to expand exports and/or (ii) a tighter monetary and fiscal policy to deflate its import volumes.

List some of the possible effects on its poverty-reduction agenda AND on its levels of indebtedness that may follow from policies (i) and (ii).