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

Module 2: Macroeconomics

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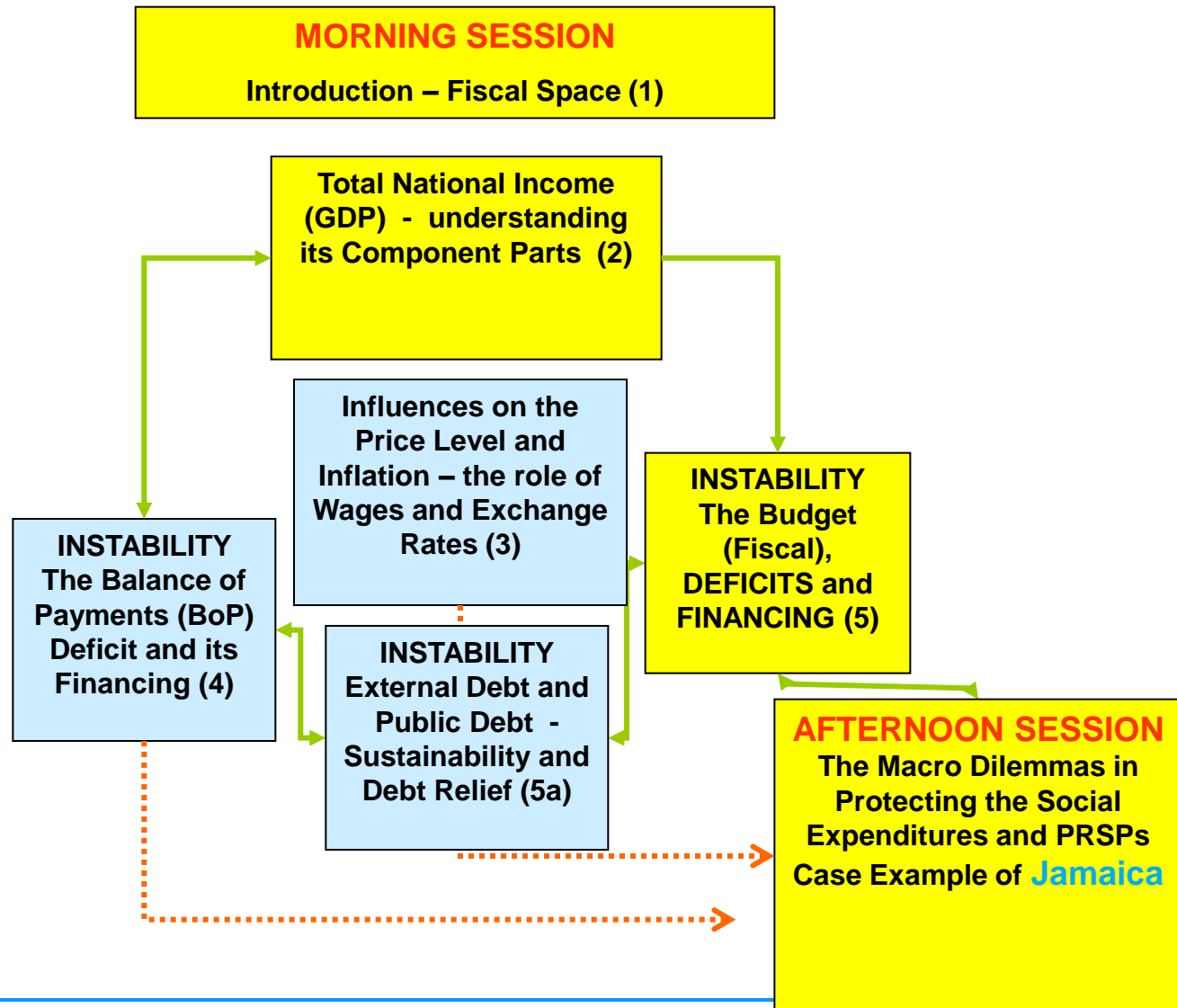**Venue: New York 2010**

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 **constrained** 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 Budget (Fiscal), DEFICITS and FINANCING (5)

INSTABILITY The Balance of Payments (BoP) Deficit and its Financing (4)

INSTABILITY External Debt and Public Debt - Sustainability and Debt Relief (5a)

AFTERNOON SESSION

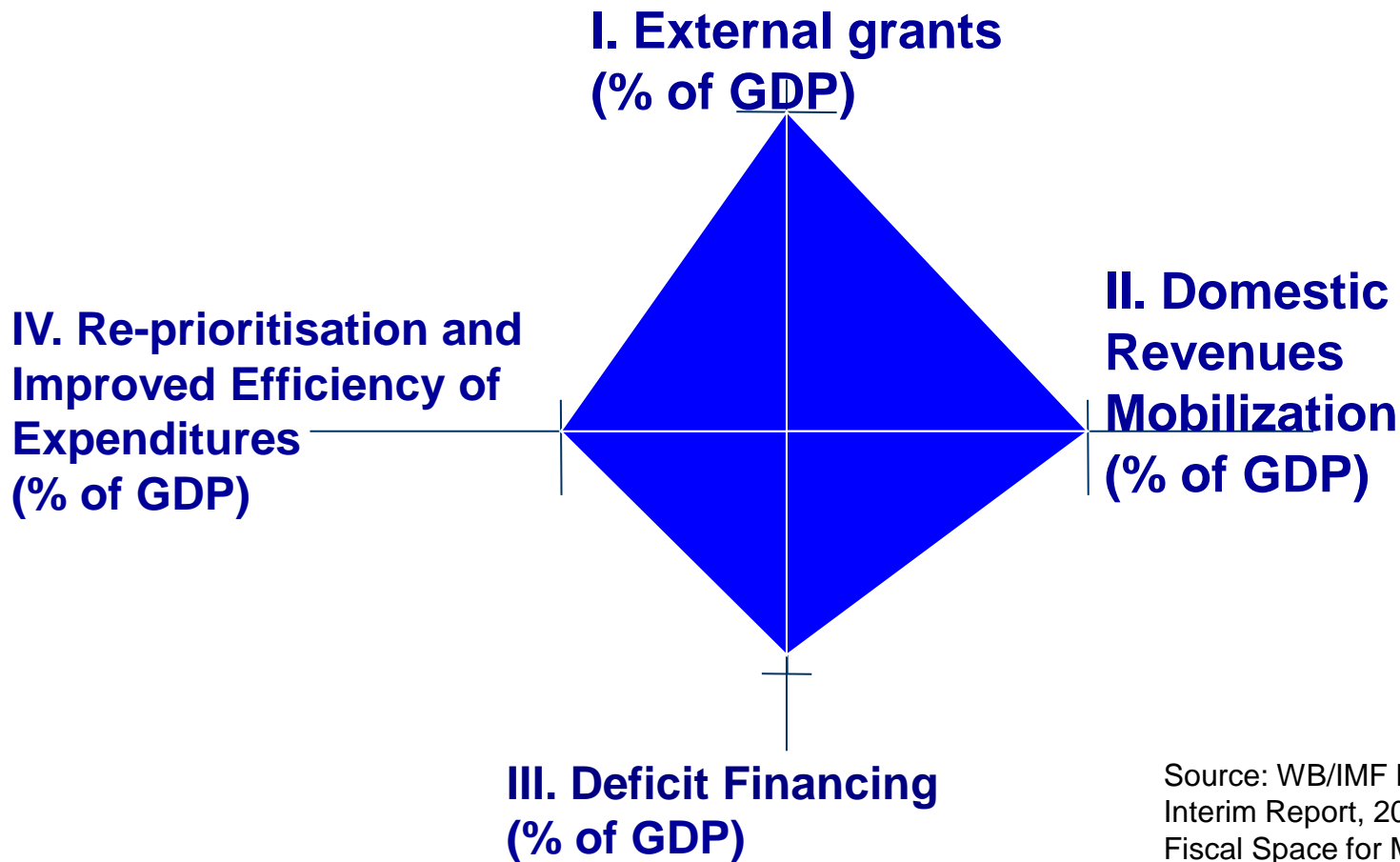**The Macro Dilemmas in Protecting the Social Expenditures and PRSPs Case Example of Jamaica**

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

I. External grants (% of GDP)

II. Domestic Revenues Mobilization (% of GDP)

III. Deficit Financing (% of GDP)

IV. Re-prioritisation and Improved Efficiency of Expenditures (% of GDP)

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

How do LAC Countries perform on some of these approaches?

Government Tax and Fee Revenue (% of GDP)?

	2005	2006	2007	2008	2009 Proj.	2010 Proj.
Central America						
Belize	22.8	23.9	26.3	26.2	26.5	26.7
Costa Rica	20.9	21.2	22.8	23.3	22.2	23.3
El Salvador	16.3	17.2	17.1	16.9	15.7	17.0
Guatemala	12.0	12.7	12.9	12.0	10.6	10.9
Honduras	24.2	24.1	24.4	25.5	23.7	23.5
Nicaragua	26.9	28.8	29.0	29.1	28.3	30.2
Panama	22.3	24.9	28.2	26.0	23.5	23.4
South America						
Argentina	29.4	29.9	31.6	33.2	34.8	35.0
Bolivia	30.9	34.3	34.5	38.9	33.9	35.5
Brazil	34.6	34.7	35.1	36.6	35.3	35.8
Chile	25.9	27.7	29.5	28.6	23.8	24.7
Colombia	26.1	27.3	27.1	26.6	26.4	25.6
Ecuador	24.2	27.4	28.8	32.6	29.7	31.7
Guyana	44.1	46.7	44.7	42.4	45.6	45.2
Paraguay	23.3	24.6	23.1	22.9	22.1	22.6
Peru	24.2	25.4	26.1	26.6	23.1	23.5
Uruguay	28.0	27.7	27.6	25.4	26.3	27.3
Venezuela	37.6	37.4	33.0	30.8	24.4	27.1

Note:

(i)   **The huge country variations (e.g. Guat versus Nica and Guyana)**

(ii)   **The large year to year changes in some cases (e.g. Venz. versus Arg)**

Caribbean ratios average around 28% except Haiti and D. Rep.

Fiscal Deficits (% of GDP)

Overall balance   ### Primary balance

	2005	2006	2007	2008	2009 Proj.	2010 Proj.		2008	2009 Proj.	2010 Proj.
Central America										
Belize	-5.4	-2.0	-1.1	0.8	-1.0	-2.6		4.7	2.6	1.4
Costa Rica	-1.2	0.5	1.9	0.3	-4.0	-4.1		2.1	-2.4	-2.2
El Salvador	-3.0	-2.9	-1.9	-3.1	-5.1	-4.3		-0.7	-2.7	-1.3
Guatemala	-1.2	-1.2	-0.3	-0.7	-3.0	-2.6		0.6	-1.5	-0.9
Honduras	-1.4	-1.9	-1.6	-1.7	-2.7	-2.9		-2.6	-3.1	-3.3
Nicaragua	-1.3	0.8	0.9	-1.5	-4.6	-3.2		-0.3	-3.2	-1.8
Panama	-2.6	0.5	3.5	0.4	-2.0	-2.5		3.5	1.2	0.6
South America										
Argentina	-1.8	-1.1	-2.1	-0.1	-3.9	-2.4		2.9	0.5	0.6
Bolivia	-2.2	4.5	1.6	2.8	-1.4	0.1		4.7	0.4	2.3
Brazil	-3.4	-3.5	-2.8	-1.5	-3.8	-1.2		4.1	1.5	3.3
Chile	4.7	7.9	9.0	5.4	-4.2	-1.2		5.9	-3.8	-0.8
Colombia	0.0	-0.7	-0.7	-0.1	-3.1	-3.0		3.2	0.5	0.5
Ecuador	0.7	3.7	2.2	-1.1	-3.5	-1.2		0.3	-2.6	-0.3
Guyana	-13.6	-11.5	-7.6	-7.9	-8.0	-6.6		-6.0	-5.2	-3.8
Paraguay	0.9	0.8	1.5	2.7	-2.1	-1.6		3.9	-1.3	-0.8
Peru	-0.3	2.2	3.5	2.1	-1.9	-1.7		3.7	-0.6	-0.4
Uruguay	-1.4	-0.6	0.0	-1.4	-2.6	-2.1		1.4	0.4	0.8
Venezuela	4.1	-1.6	-2.8	-2.6	-7.0	-5.4		-1.2	-4.9	-2.6

Note:

(i) **Even the larger deficits are smaller than in the US and the UK (today)**

(ii) **Some of the larger deficits are in the large revenue countries**

(iii) **Some countries have primary surpluses but deficits overall – a reflection of high debt charges. (e.g. Brazil)**

Overall deficits in the Caribbean are generally a bit larger

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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Topic 2: The Main Aggregates

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

Merely the sum of everything the country produces:

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

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.

World Incomes

Absolute Numbers

	No. of Countries	No. of People (million)	Total GNI ER basis $ billion.	Per capita GNI ER basis $US
Low Income	**59**	**2,353**	**1,363**	**580**
Lower Middle-Income	**54**	**2,475**	**4,878**	**1918**
Upper Middle-Income	40	599	**3,579**	**5625**
High Income	56	1,011	**34,524**	**35131**
(of which OECD Members)	24			
TOTAL - WORLD	209	6,438	**44,318**	**6987**

Here's an Example for One Relatively Poor Country - GDP by sector in Jamaica *(GDP in constant prices)*

	2005	2006	2007	2008
Agriculture, hunting, forestry, fishing (ISIC A-B)	5.7	5.5	5.1	5.4
Mining, Manufacturing, Utilities (ISIC C-E)	16.0	15.7	15.9	15.9
Manufacturing (ISIC D)	8.5	8.3	8.4	8.4
Construction (ISIC F)	8.2	7.9	8.3	8.1
Wholesale, retail trade, restaurants and hotels (ISIC G-H)	23.5	23.8	23.5	23.6
Transport, storage and communication (ISIC I)	11.0	11.2	11.3	11.2
Other Activities (ISIC J-P)	35.6	36.0	35.9	35.8
TOTAL	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.

Jamaica – National Expenditures – how was GDP Used? (%age shares of GDP)

	2005	2006	2007	2008
Household consumption expenditure	77.4	77.6	81.6	80.9
Government consumption expenditure	13.8	13.9	14.0	14.0
Gross capital formation (Fixed + Inventories)	26.8	28.3	26.6	26.8
Exports of goods and services	35.4	39.6	37.9	39.1
Imports of goods and services	**53.5**	**59.4**	**60.1**	**60.8**
TOTAL	100.0	100.0	100.0	100.0

Source: UNSO

How Did Jamaica USE Total Production in 2008?

Imports of goods and services, - 60.8

Household consumption expenditure, 80.9

Exports of goods and services, 39.1

Gross capital formation (Fixed + Inventories), 26.8

Government consumption expenditure, 14.0
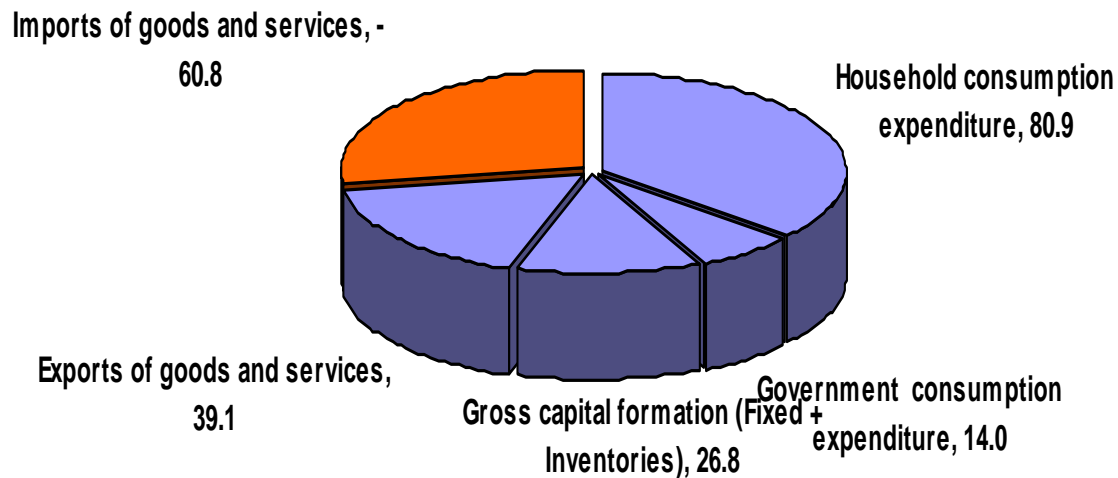
$$GDP(Y) = \text{Consumption Private}\,(C_{pr}) + \text{Consumption Govt.}(Cg) +$$
$$\text{Investment}\,(I) + \text{Exports}\,(X)\ \text{net of Imports}(M)......[3]$$

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

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

GDP Total	100.0	100.0	100.0	100.0
minus Household Consumption	77.4	77.6	81.6	80.9
minus Government Consumption	13.8	13.9	14.0	14.0
Minus Investment	26.8	28.3	26.6	26.8
EQUALS				
Exports minus Imports (or CAB)	**-18.1**	**-19.8**	**-22.2**	**-21.7**
Check	-18.1	-19.8	-22.2	-21.7

- Notice that Jamaica's TOTAL Consumption is high relative to its TOTAL Production. So much of its new investment spending must come from running an External Deficit (which has to be financed)

- In most years almost all of Jamaica's domestic investment is financed *in effect* with foreign help

Financing Gap TWO - The Savings: Investment Gap

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

.

	2005	2006	2007	2008
GDP Total	**100.0**	**100.0**	**100.0**	**100.0**
minus Household consumption	77.4	77.6	81.6	80.9
minus Government consumption	13.8	13.9	14.0	14.0
EQUALS				
Savings	**8.7**	**8.5**	**4.4**	**5.1**
Note also that:				
CAB	18.1	19.8	22.2	**21.7**
plus Savings	8.7	8.5	4.4	5.1
EQUALS				
Investment	**26.8**	**28.3**	**26.6**	**26.8**

Because SAVINGS in Jamaica are quite low, we see again that INVESTMENT (in schools, roads etc but also in the productive economy) relies 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 low income country governments have shown a traditional preference for **Fixed** Exchange Rates. But note change in LAC (including Jamaica)

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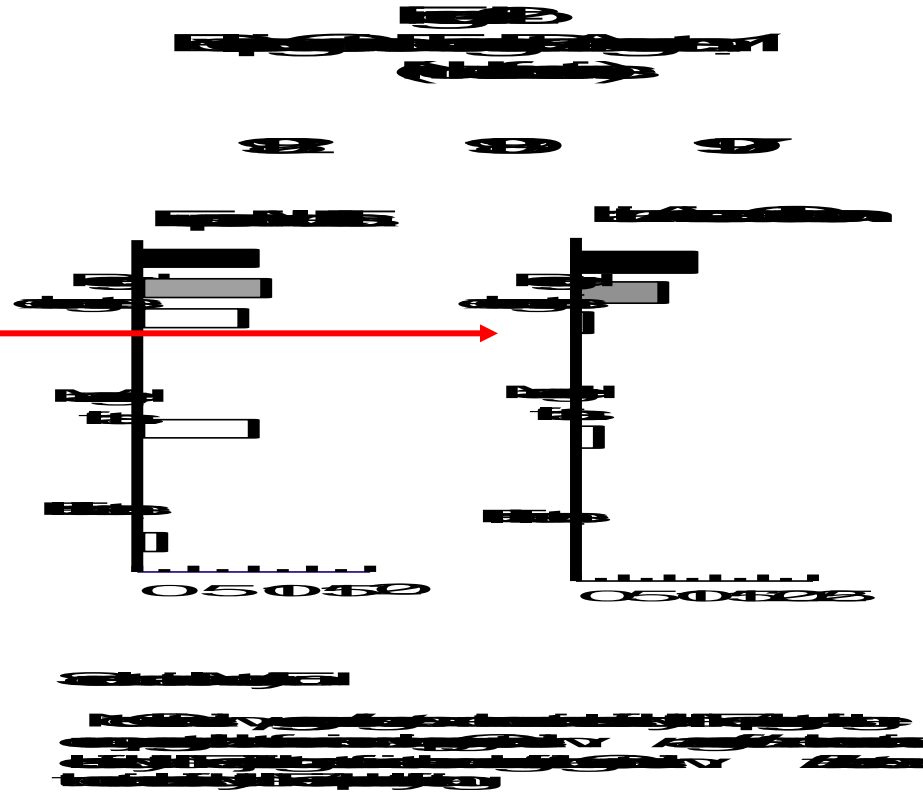
Example of a (fixed) ER Disaster - Ghana in the 1970s (stylised)

	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

1 What do we mean by "Instability"?

ANSWER – it comprises some of….

- high and variable price inflation (including exchange rates)
- erratic but often negative GDP growth rates
- unsustainable levels of debt that finance fiscal and external deficits which have to be reduced (eventually)

2. Why does Instability hurt the poor?

ANSWERS include

- Inflation is a regressive tax that falls disproportionately on those holding cash rather than interest earning assets
- Instability tends to cause lower output growth longer term and this impacts directly on the poor via direct impacts on incomes but also on human capital – school enrolment rates, drop out rates etc.

How the Current Global Crisis has affected Growth Prospects in LACM

Table 2.6. Selected Western Hemisphere Economies: Real GDP, Consumer Prices, and Current Account Balance

(Annual percent change, unless noted otherwise)

	Real GDP				Consumer Prices[1]				Current Account Balance[2]			
	2007	2008	2009	2010	2007	2008	2009	2010	2007	2008	2009	2010
Western Hemisphere	5.7	4.2	−1.5	1.6	5.4	7.9	6.6	6.2	0.4	−0.7	−2.2	−1.6
South America and Mexico[3]	5.7	4.2	−1.6	1.6	5.3	7.7	6.7	6.3	0.7	−0.3	−1.9	−1.3
Argentina[4]	8.7	7.0	−1.5	0.7	8.8	8.6	6.7	7.3	1.6	1.4	1.0	1.8
Brazil	5.7	5.1	−1.3	2.2	3.6	5.7	4.8	4.0	0.1	−1.8	−1.8	−1.8
Chile	4.7	3.2	0.1	3.0	4.4	8.7	2.9	3.5	4.4	−2.0	−4.8	−5.0
Colombia	7.5	2.5	0.0	1.3	5.5	7.0	5.4	4.0	−2.8	−2.8	−3.9	−3.3
Ecuador	2.5	5.3	−2.0	1.0	2.3	8.4	4.0	3.0	2.3	2.4	−3.5	−2.3
Mexico	3.3	1.3	−3.7	1.0	4.0	5.1	4.8	3.4	−0.8	−1.4	−2.5	−2.2
Peru	8.9	9.8	3.5	4.5	1.8	5.8	4.1	2.5	1.4	−3.3	−3.3	−3.2
Uruguay	7.6	8.9	1.3	2.0	8.1	7.9	7.0	6.7	−0.8	−3.6	−1.7	−2.4
Venezuela	8.4	4.8	−2.2	−0.5	18.7	30.4	36.4	43.5	8.8	12.3	−0.4	4.1
Central America[5]	6.9	4.3	1.1	1.8	6.8	11.2	5.9	5.5	−7.0	−9.2	−6.1	−7.1
The Caribbean[5]	5.8	3.0	−0.2	1.5	6.7	11.9	4.0	5.8	−1.5	−2.8	−5.1	−4.1

[1]Movements in consumer prices are shown as annual averages. December/December changes can be found in Table A7 in the Statistical Appendix.
[2]Percent of GDP.
[3]Includes Bolivia and Paraguay.

Why UNICEF should be concerned about macroeconomic crisis/ instability ?

Macroeconomic crises /instability

Can ruin family stability and service provision by:

- Stagnation or recession propelling unemployment and falls in (already low) public revenues
- Exchange rate devaluation pushing up inflation, increasing foreign debt burden in national currency and increasing the costs of vital social expenditures
- Inflation can undermine wages and households savings
- Austerity budgets measures (the frequent unavoidable response to a crisis) entail cuts in public services and/or in their financing

→ Note: social unrest and/or unsustainable coping strategies from private and public sector actors could further deepen the crisis and its impact

Manifestations of Instability - Jamaica

Inflation Rate 1955-2008
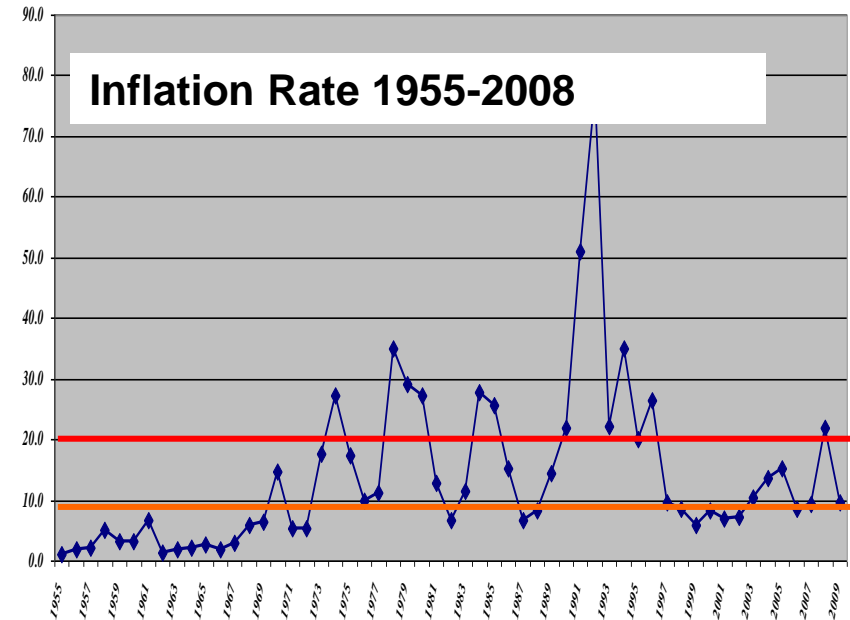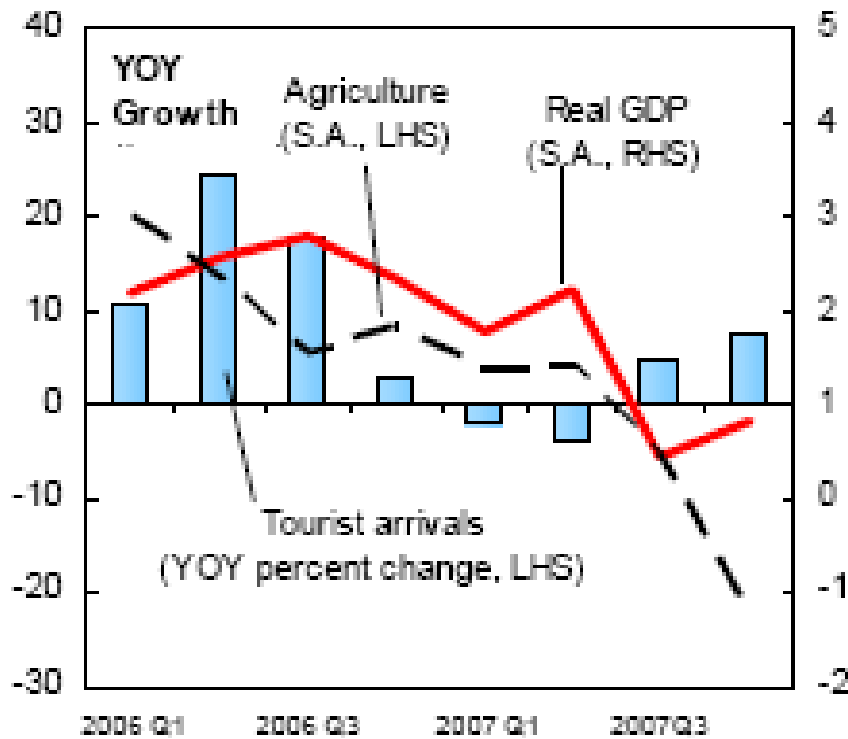
Growth Rates of GDP – 1950 to 2003 (in 1990 prices)
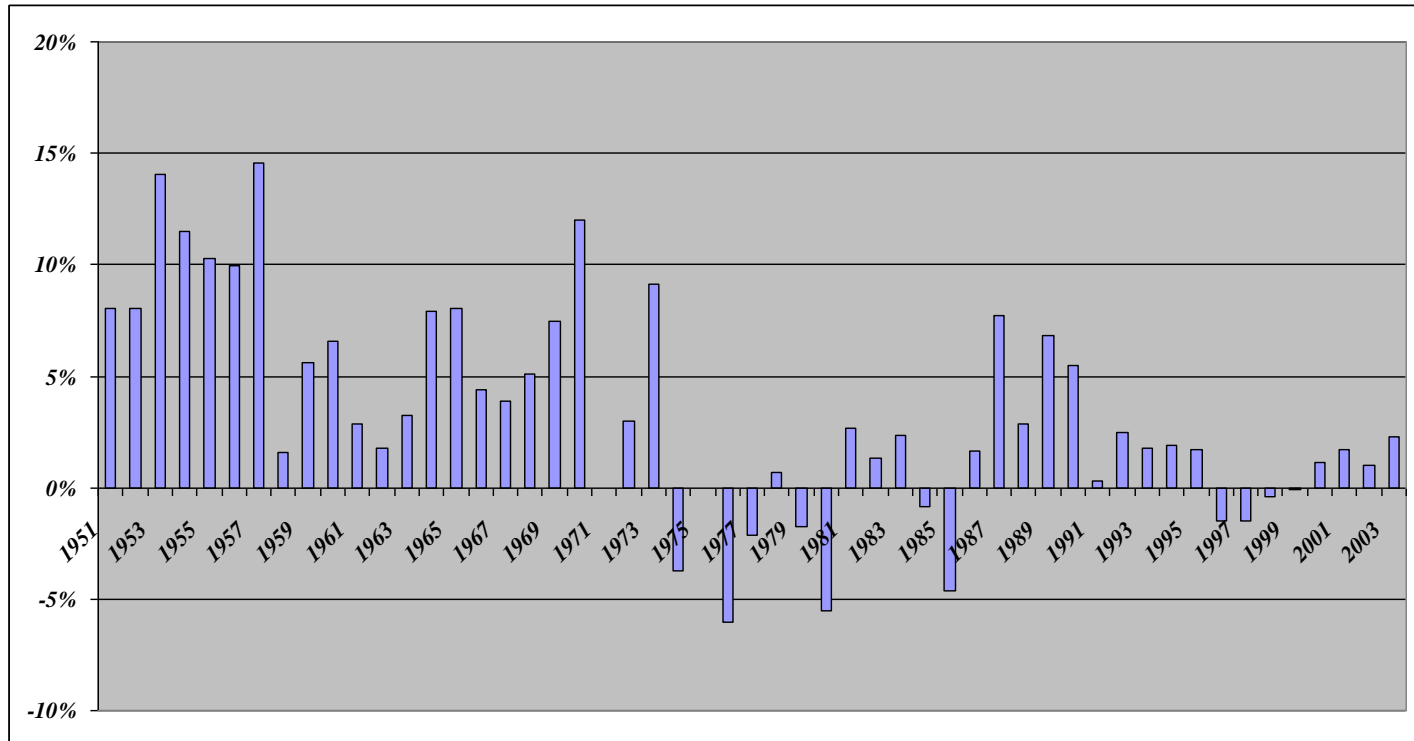
Source: University of Groningen
Growth and Development Centre

USA decline and Jamaica's Fiscal Space

Impact of negative shock to US GDP*
(In percentage points)

First year
Second year
*Shock set to two std. dev of US GDP growth

GDP growth | Revenues growth | Primary Expenditures growth
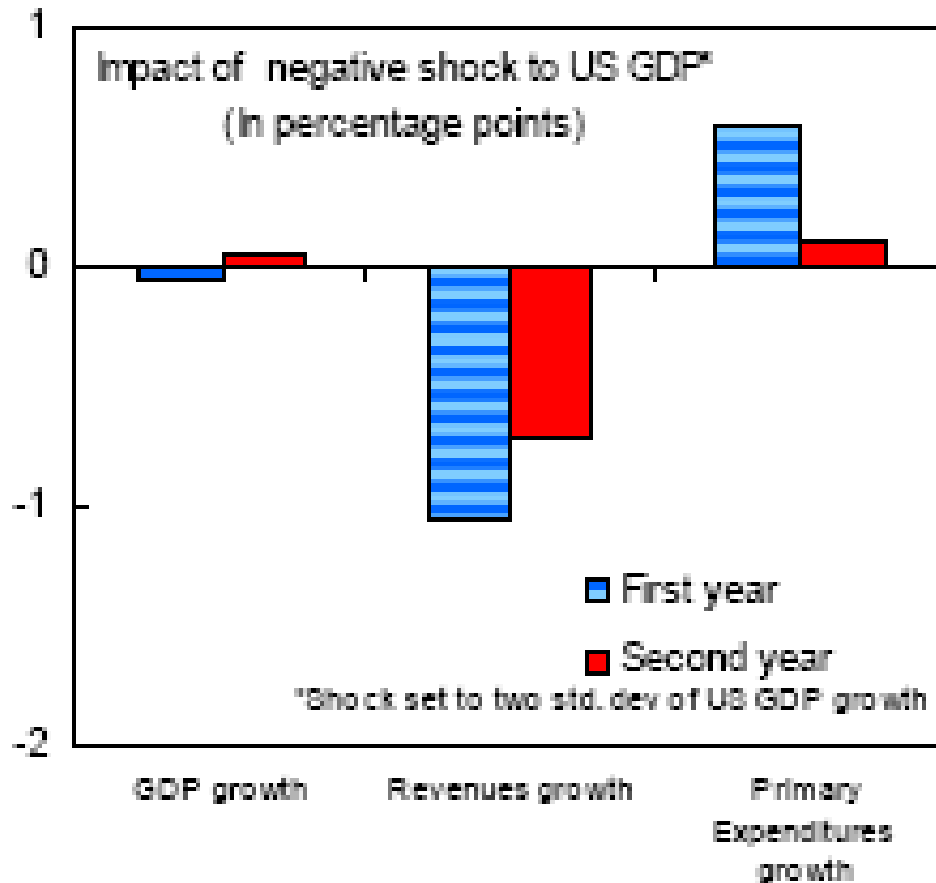
Note GDP effects of the US shock are quite small. But partly this is due to the shock absorption of (i) lower revenue receipts and (ii) higher public expenditures. BOTH worsen the deficits.

Source: IMF Article IV Report, 2008 Box 2

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 REST OF THE WORLD ("Foreign") in a tabular format in the next slide

BUT 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.

The Key Aggregate Identities

	Private Sector	Government	Foreign	TOTALS
	(firms and people)	(including state firms)	(govt, firms, people)	
Goods and Services	SAVINGS less INVESTMENT	Govt Revenue less Spending (Cg+Ig)	CAB	Zero
	matched by:	*financed by*	*financed by*	
Non-Monetary Assets	Remiitances less LENDING	BORROWING via Bonds	Transfers and LENDING	Zero
	via Financial Assets	and Transfers received	to the Country	
	and	*and*	*and*	
Monetary Assets	Increase in Money Balances	Borrowing via Money Creation	Foreign Reserves	Zero
TOTALS	Zero	Zero	Zero	

The algebra for line 1 above is explained on the Notes pages.

In summary it results in: $(G - T) \equiv (Sp - I) + (M - X)$

A Numerical Example

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

%ages of GDP	Private Sector (firms and people)	Government (including state firms)	Foreign (govt, firms, people)	TOTALS
Goods and Services	**-15.20%**	**-6.50%**	**21.7 (deficit)**	**Zero**
	matched by:	*financed by:*	*financed by:*	
Non-Monetary Assets	Remittances - Purchase Financial	Borrowing via Bonds etc	Grants and Loans	**Zero**
	and	*and*	*and*	
Monetary Assets	Change in Money Balances	Borrwing via Money Cre	Foreign Reserves	**Zero**
TOTALS	**Zero**	**Zero**	**Zero**	

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:

o high Government expenditure relative to tax revenues (resulting in the budget deficit of 6.5 % of GDP) has a direct impact on the size of Jamaica's BoP current deficit and so on the EXTERNAL borrowing that the county needs to make

o 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
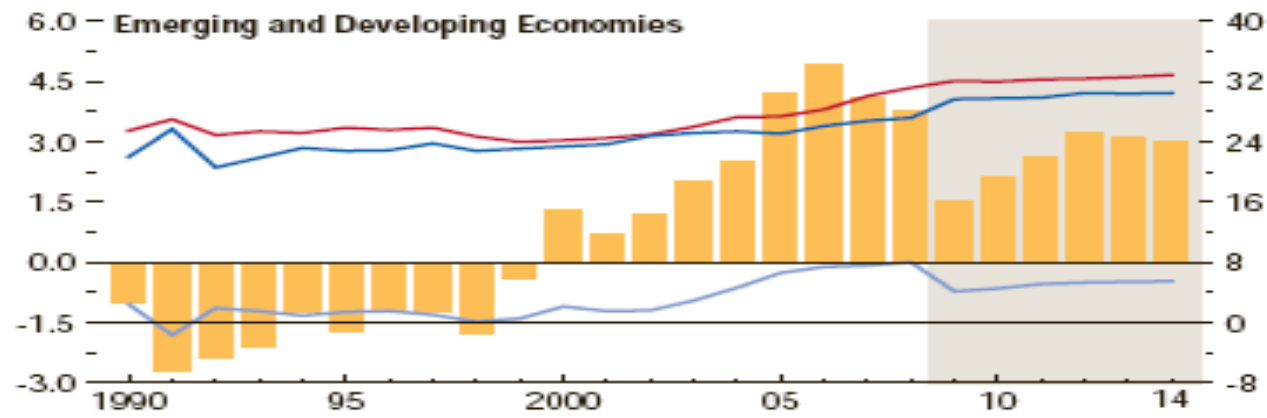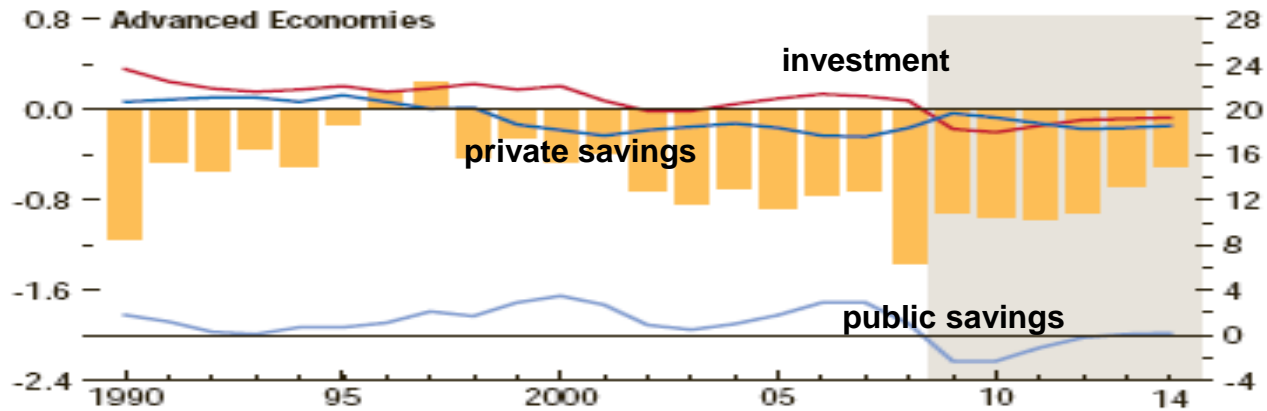
Source: WEO database projections.

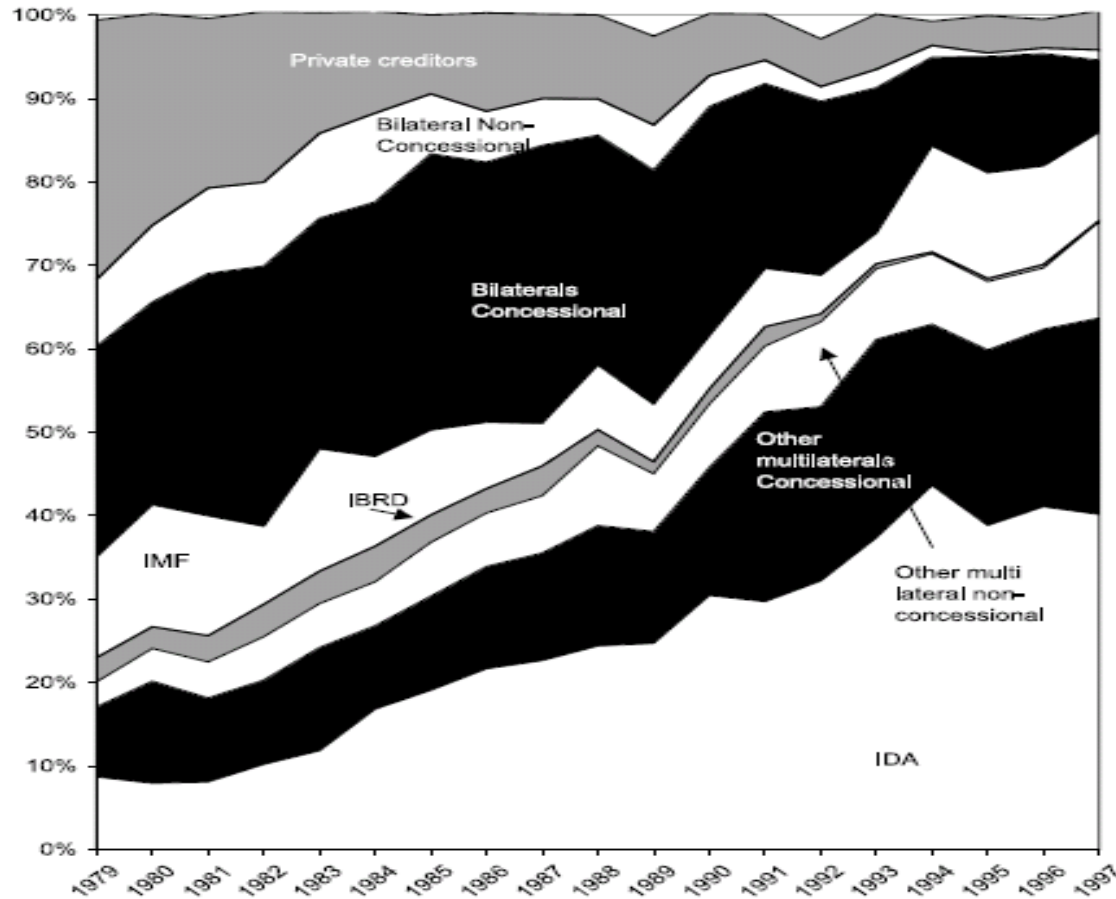# The Changing Composition of HIPC Debt *Source: W. Easterly in World Development, 2002*

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)
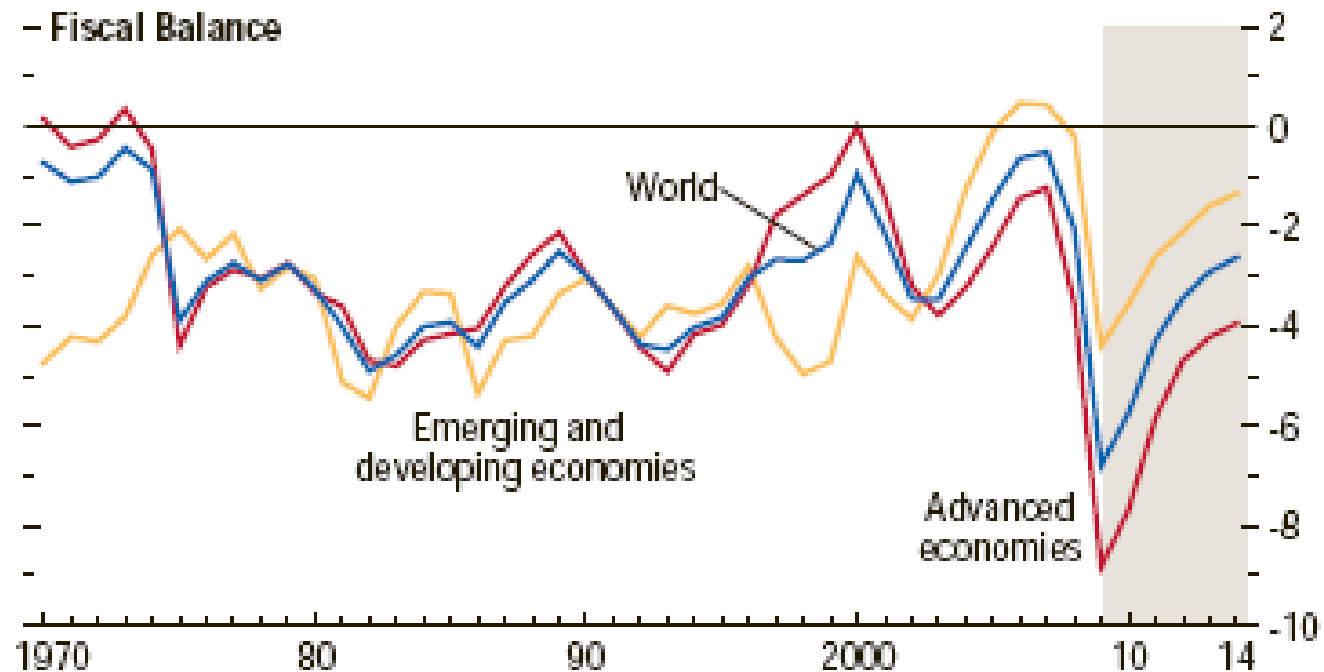
The other main variants are:

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

Figure 1.14. General Government Fiscal Balances and Public Debt

(Percent of GDP)

Fiscal consolidation will be a major challenge as the global economy starts to recover from the present crisis. Public debt is expected to continue mounting even as deficits are reduced.

Global Crisis and Fiscal Deficits in LACM (% of GDP)

Overall balance

	2005	2006	2007	2008	2009 Proj.	2010 Proj.
Central America						
Belize	-5.4	-2.0	-1.1	0.8	-1.0	-2.6
Costa Rica	-1.2	0.5	1.9	0.3	-4.0	-4.1
El Salvador	-3.0	-2.9	-1.9	-3.1	-5.1	-4.3
Guatemala	-1.2	-1.2	-0.3	-0.7	-3.0	-2.6
Honduras	-1.4	-1.9	-1.6	-1.7	-2.7	-2.9
Nicaragua	-1.3	0.8	0.9	-1.5	-4.6	-3.2
Panama	-2.6	0.5	3.5	0.4	-2.0	-2.5
South America						
Argentina	-1.8	-1.1	-2.1	-0.1	-3.9	-2.4
Bolivia	-2.2	4.5	1.6	2.8	-1.4	0.1
Brazil	-3.4	-3.5	-2.8	-1.5	-3.8	-1.2
Chile	4.7	7.9	9.0	5.4	-4.2	-1.2
Colombia	0.0	-0.7	-0.7	-0.1	-3.1	-3.0
Ecuador	0.7	3.7	2.2	-1.1	-3.5	-1.2
Guyana	-13.6	-11.5	-7.6	-7.9	-8.0	-6.6
Paraguay	0.9	0.8	1.5	2.7	-2.1	-1.6
Peru	-0.3	2.2	3.5	2.1	-1.9	-1.7
Uruguay	-1.4	-0.6	0.0	-1.4	-2.6	-2.1
Venezuela	4.1	-1.6	-2.8	-2.6	-7.0	-5.4

Primary balance

	2008	2009 Proj.	2010 Proj.
Central America			
Belize	4.7	2.6	1.4
Costa Rica	2.1	-2.4	-2.2
El Salvador	-0.7	-2.7	-1.3
Guatemala	0.6	-1.5	-0.9
Honduras	-2.6	-3.1	-3.3
Nicaragua	-0.3	-3.2	-1.8
Panama	3.5	1.2	0.6
South America			
Argentina	2.9	0.5	0.6
Bolivia	4.7	0.4	2.3
Brazil	4.1	1.5	3.3
Chile	5.9	-3.8	-0.8
Colombia	3.2	0.5	0.5
Ecuador	0.3	-2.6	-0.3
Guyana	-6.0	-5.2	-3.8
Paraguay	3.9	-1.3	-0.8
Peru	3.7	-0.6	-0.4
Uruguay	1.4	0.4	0.8
Venezuela	-1.2	-4.9	-2.6

Note:

(i) **Even the larger deficits are smaller than in the US and the UK (today)**

(ii) **Some of the larger deficits are in the large revenue countries**

(iii) **Some countries have primary surpluses but deficits overall – a reflection of high debt charges.**

Overall deficits in the Caribbean are generally a bit larger

Jamaica: Fiscal Balances through the Crisis (% of GDP)

	2005	2006	2007	2008	2009 (proj)	2010 (proj)
Revenue	26.3	26.1	27.1	26.5	28.8	27.5
Primary Expenditure	16.3	18.4	19.4	21.1	23.6	21.8
Primary Balance	10.0	7.7	7.7	5.4	5.2	5.7
Overall Balance	**-3.6**	**-4.5**	**-4.0**	**-6.5**	**-10.6**	**-8.3**

Source: IMF, *Western
Hemisphere assessment*,
October 2009

Why do Fiscal Deficits Matter?

Answer 1: In low-income countries fiscal deficits are prone to be quite high and to be financed by "printing money"

- Because both tax administration and capital markets, are relatively underdeveloped
- So governments often have no option but to monetize deficits i.e. borrow from the central banks –"print money" to finance these deficits

Answer 2: Monetary growth can have strong effects on INFLATION – a key UNICEF concern regarding poor persons) by stoking the demand for real goods & services that can drive up prices and wages – see also the Notes page to Slide 16 – especially where financial sectors are small.
- High inflation in turn can negatively impact economic growth Michael Bruno and William Easterly, *Journal of Monetary Economics* 41,(1998)

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 *α …e.g. α = 1 or 100%*)
• an inflation 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 *β*).
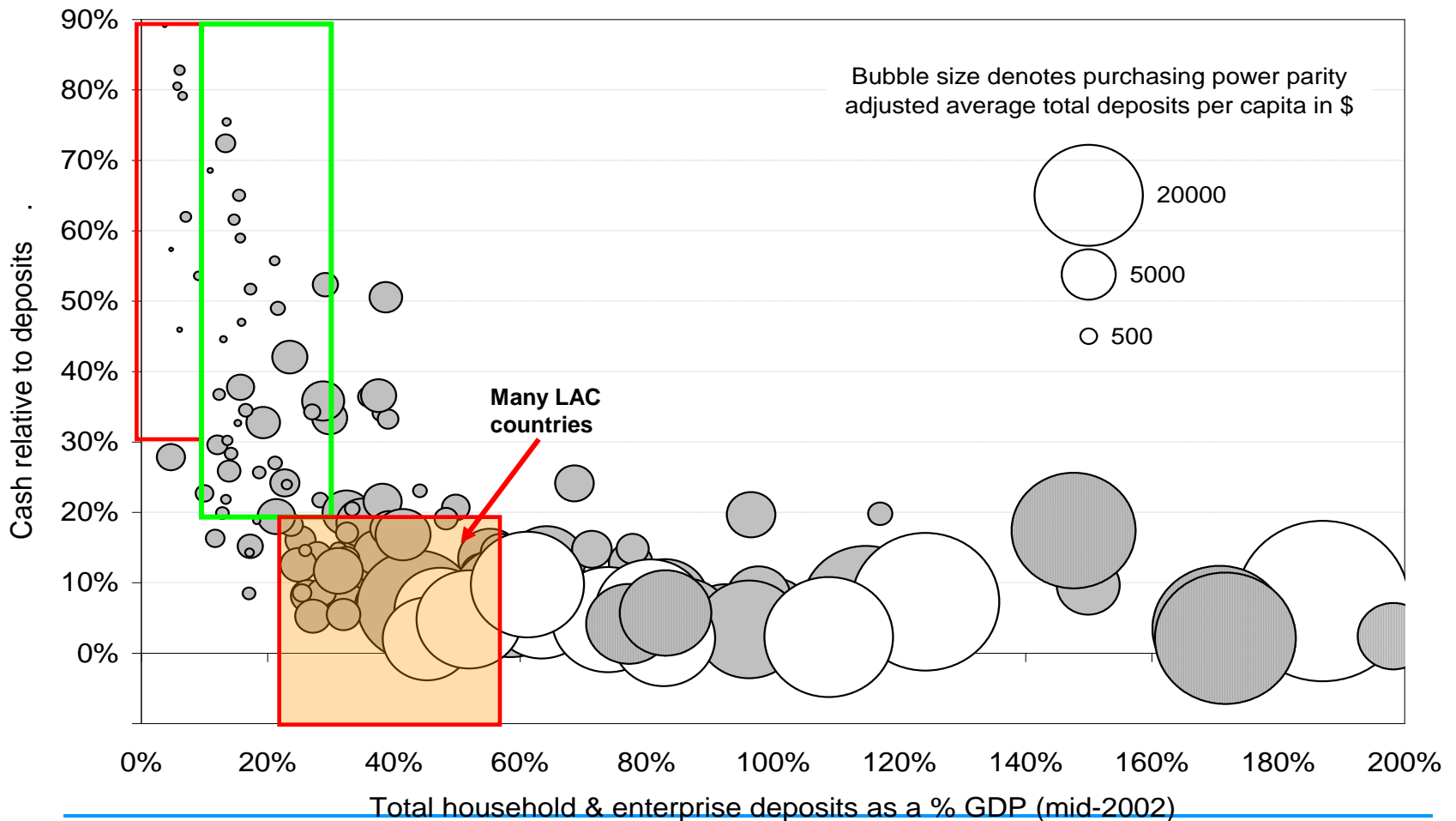
Numerical Example *(Y growth = 1% and the fiscal deficit (g) = 5% of GDP, β = zero initially (last row) but rises with inflation , inflation rate required = π,*

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%

Jamaica 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)

Bubble size denotes purchasing power parity adjusted average total deposits per capita in $

20000
5000
500

Cash relative to deposits

Many LAC countries

Total household & enterprise deposits as a % GDP (mid-2002)

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 (π) 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 is acceptable only for BRIEF periods.

• 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 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 – Jamaica is a good example of this.

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 and 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

- Fiscal Surplus (incl grants) % of GDP LEFT
- Primary Surplus (incl. grants) % of GDP LEFT
- Interest Charges (% of Revenue) RIGHT
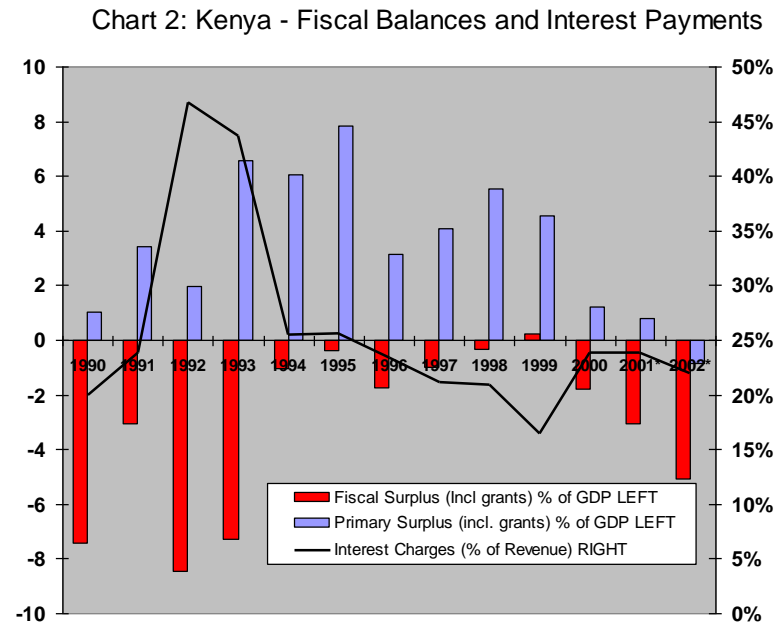
Method 3: Foreign Borrowing – the Constraints

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:

o   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

o   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).

The Influences/Constraints on the External Debt ratio (Source: S. van Wijnbergen, in *World Bank Economic Review*, Vol 3 No 3, 1989/90)

This looks at the indebtedness of the COUNTRY. Similar analysis can be applied to the indebtedness of GOVERNMENT.

He shows that a *sustainable* debt ratio (Debt divided by GDP) requires an appropriate combination of the following variables:

1. a higher real interest rate is bad – this raises the debt ratio for any *given* level of borrowing (i.e. the same logic as for the LOCAL borrowing)

2. a high **growth rate** of income (GDP) = n is good because it lowers the debt *ratio.* Again this is parallel to the effect of the growth of govt revenues in the local borrowing constraints

3. a non-interest current account BoP **surplus** is good – this can help to achieve some repayments

4. a depreciation of the real exchange rate is bad because it raises the real resources you need to find to service any given level of dollar debt

The last two points represent the main differences between foreign as compared to local borrowing.

Consider some of the Trade-Offs that arise - examples

1. A highly indebted country decides to reduce debt by running a significant BOP surplus (point 3 from the previous slide). But the fiscal austerity to achieve this surplus drastically reduces the growth rate of GDP and this worsens the countries debt ratio (because of point 2 from the previous slide) Example: Latin America in the 1980s

2. Instead the BOP and debt ratio improvement is sought by using a real exchange rate devaluation to boost growth through improved export earnings (relying on points 2 and 3 from the previous slide). This may work (Korea in the 1980s) but also creates a negative feedback effect on the debt ratio via point 4 from the previous slide. So IF the export gain FAILS to materialise, this policy is very damaging for debt.

3. 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 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 Jamaica - 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!

A 4 Minute Question Break – Time Permitting

A low-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 coffee and tea. 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).

SESSION TWO-AFTERNOON

Applying what we have learned about Macro constraints to examine some dilemmas for the social (including children) agenda in Jamaica
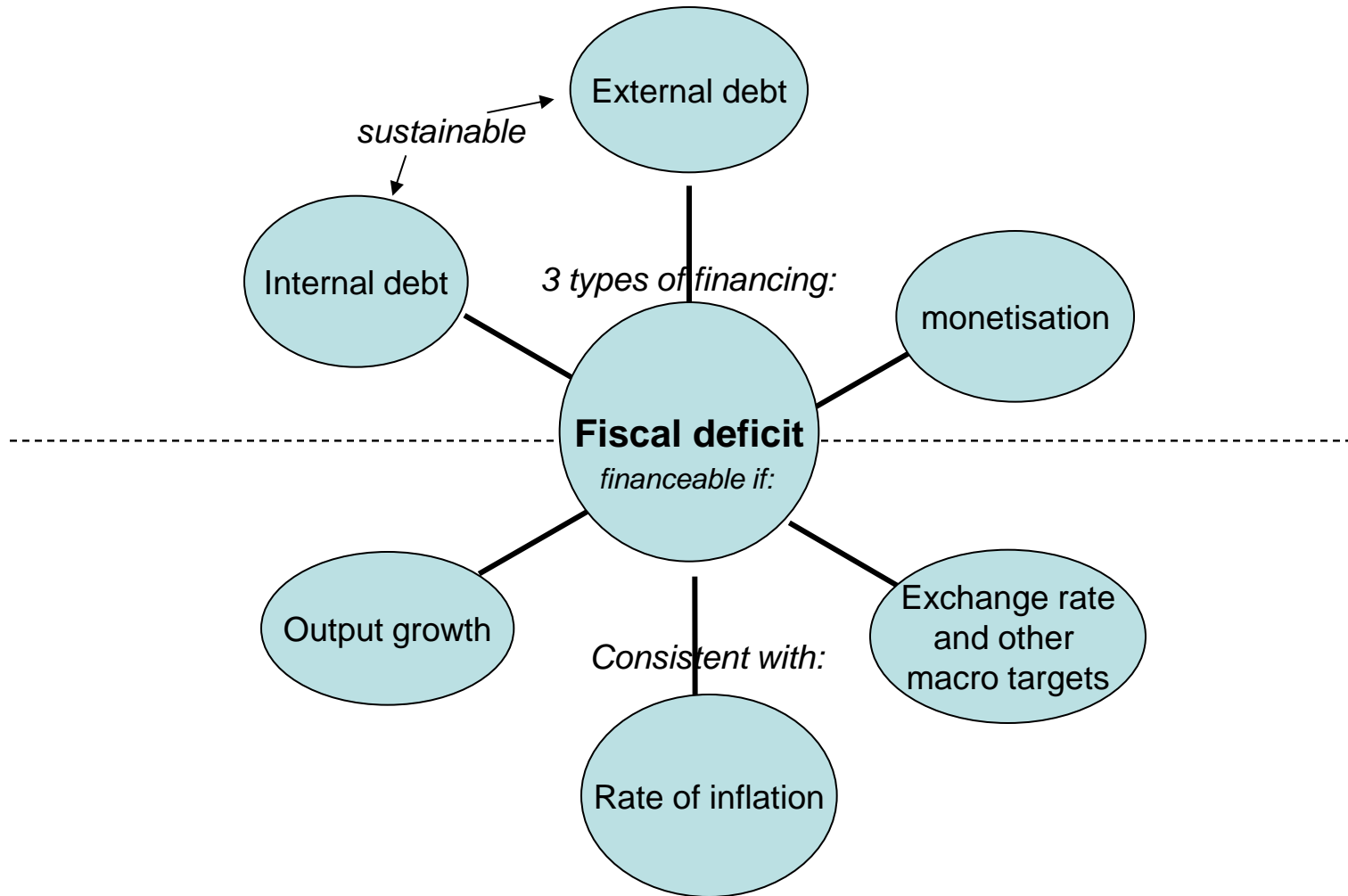
Topic 5: Bringing it Together

This last topic may help us to understand why Ministers of Finance often seem to be so insensitive to the needs of the social budget and to the underlying problems of poor families etc.

AND

Why the balancing of all the Macroeconomic constraints is a challenging task in almost all low income countries.

We use the example of a complex middle-income LAC country namely Jamaica. Even though this country has seen reasonable macro stability in recent years the problems of defending social budgets are ever to the fore.

The Minister's Dilemma in Summary

External debt

sustainable

Internal debt

3 types of financing:

monetisation

Fiscal deficit
financeable if:

Output growth

Consistent with:

Exchange rate and other macro targets

Rate of inflation
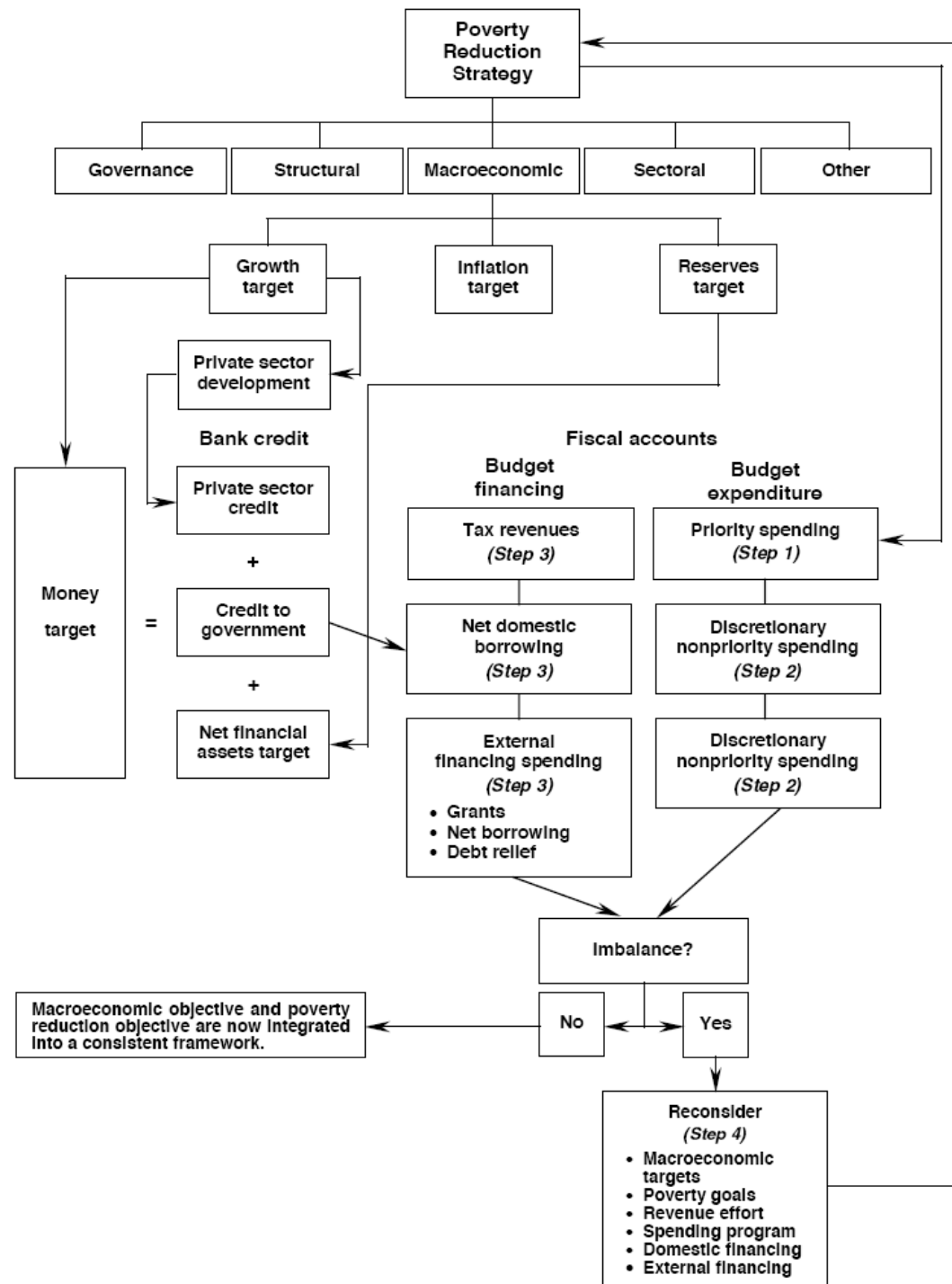
An Integrated PRSP Framework

The Figure that follows shows a framework taken from the World Bank's PRSP Source Book.

Please be aware of this

We will review a few main features of this in the remaining slides.

PLEASE PRINT THE NEXT SLIDE AS A FULL PAGE

Table 12.1 in the Source Book

The Parameters defined by the recent IMF Agreements

Jamaica agreed a large IMF program early in 2010.

In brief:

- a concessional loan of $1.2 billion
- will replace a similar amount of previous borrowing
- but the conditions will include significant fiscal restraint inlcuding:
    - Budget expenditure restraint
    - Lower wage costs in the public service

Full details of this are not yet available.

Jamaica Budget Summary 2003-2010
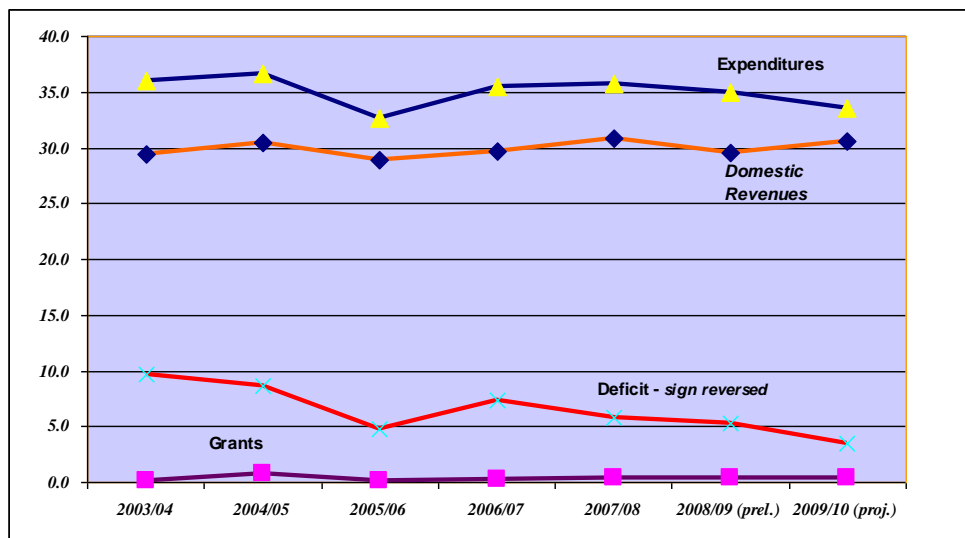
Selected Expenditures (% of GDP)				
	2003	**2004**	**2005**	**2006**
Interest Payments	**14.7%**	**13.8%**	**12.7%**	**12.4%**
of which Domestic Interest	**11.6%**	**10.7%**	**9.6%**	**9.3%**
Defense	**0.6%**	**0.5%**	**0.5%**	**0.6%**
Public Order	**2.5%**	**2.3%**	**2.5%**	na
Health	**2.2%**	**2.6%**	**2.1%**	**1.5%**
Education	**5.3%**	**4.9%**	**5.3%**	**5.0%**
Housing and Community	**0.6%**	**0.7%**	**0.6%**	na
Social Protection	**0.3%**	**0.4%**	**0.4%**	na
All Social Services	**8.4%**	**8.6%**	**8.4%**	na

Issues for the Minister

1. Revenue Fragility

- Total Budget Revenues (including grants) have in the past been strong at around 28-30% of GDP

- Although revenue fluctuations may seem small (around +/- 2% of GDP from year to year) this is a fluctuation equivalent to the whole of the Health budget

- Also with GDP growth so low (1-2% is common but negative in 2008 and 2009), revenues can be expected to fall somewhat

- Jamaica has only limited access to Grant financing to supplement domestic revenues

Issues for the Minister

2. Inflation Financing is limited

Jamaica's recent inflation stability is fragile at best and comes after many earlier episodes of high inflation (>20%). So although the monetisation ratio in quite high at around 40%, the Minister probably cannot contemplate too large a GDP financing from the inflation tax
• e.g. a 6% of GDP deficit would increase the money supply by 15%
• in MV = PY with Y only growing quite slowly (2-3% but falling in 2009), a 15% hike in "M" could of itself add an inflationary impulse of about 12-15%.
• there is no inflation target as such but the BOJ anticipated level is circa 10-12%

The Minister could relax his inflation targeting but would then likely expect to face higher interest rates on government debt – see next slide

### Inflation rate (CPI) 1955-2010
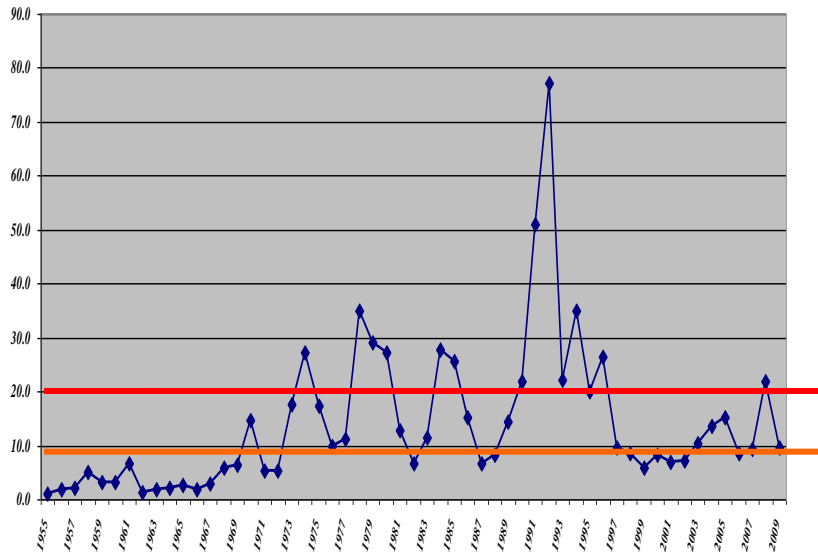
Issues for the Minister

3. External Debt Financing

- Jamaica's public debt is exceptionally large (> 120% of GDP).
- External public debt itself about 45% of GDP but a further 12% of GDP is private debt guaranteed by government.
- The interest charge just on the external debt is large (circa 3.5% of GDP per annum) - larger than the health budget
- Repayments of principal add to this fiscal burden
- PLUS a (downward) floating exchange rate can increase the burden of the external debt on the budget in local currency terms
- A 10% depreciation would potentially add up to 1% GDP to the deficit - ANOTHER reason to try to avoid inflation

External Debt (% of GDP)

Jamaica Total Public Debt (In percent of GDP)
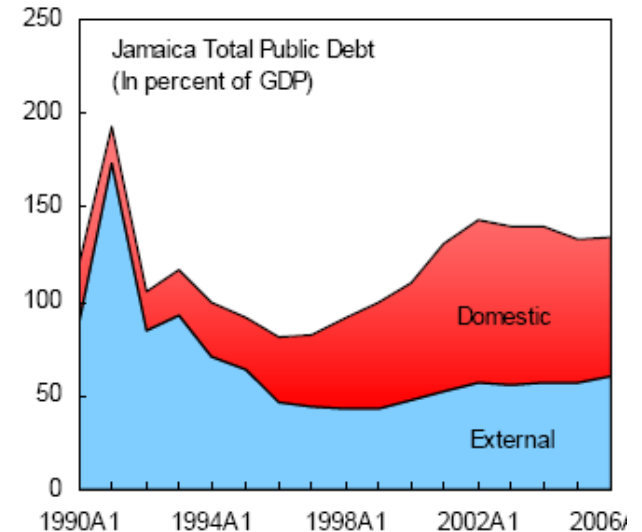
Exchange Rate trend 1972-2008
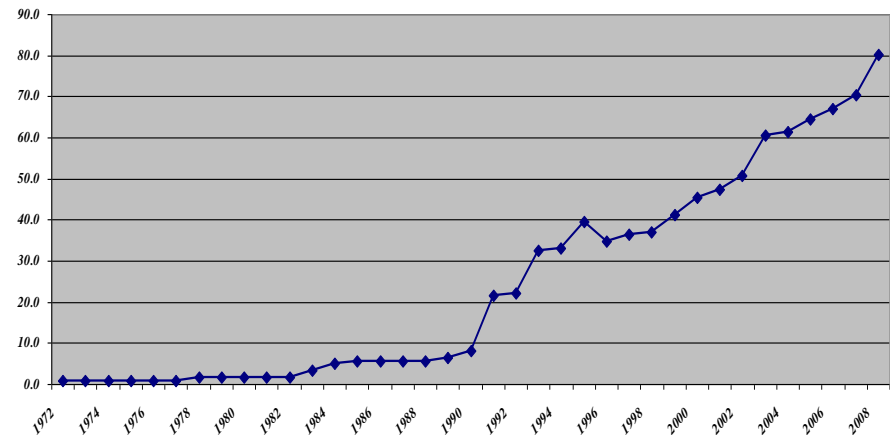
Issues for the Minister

4. Domestic Debt

• This has risen to an extremely high level – over 70% of GDP

• The INTEREST charges alone pre-empt around 10% of all budgetary revenues

• Treasury borrowing rates have needed to be around 11-12% (3 times the rates in the USA) to enable the Minister to meet the public borrowing needs.

• Since interest rates are high relative to the growth rates of government revenue, the Minister cannot really use increased borrowing as a source of financing for the budget deficit.

The recent IMF programme could play a big role here by – of nothing else – reducing the interest rate on the existing debt
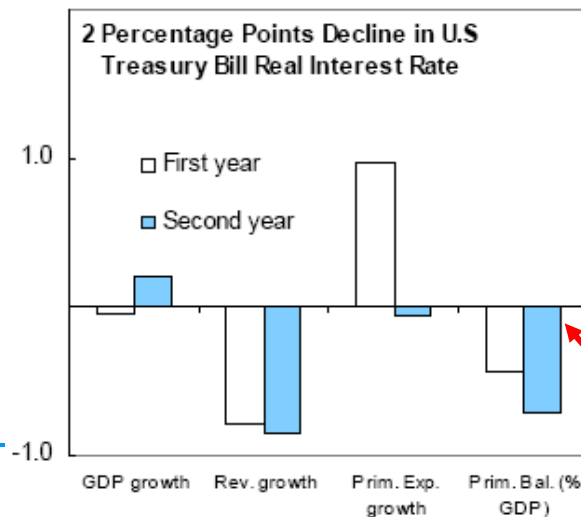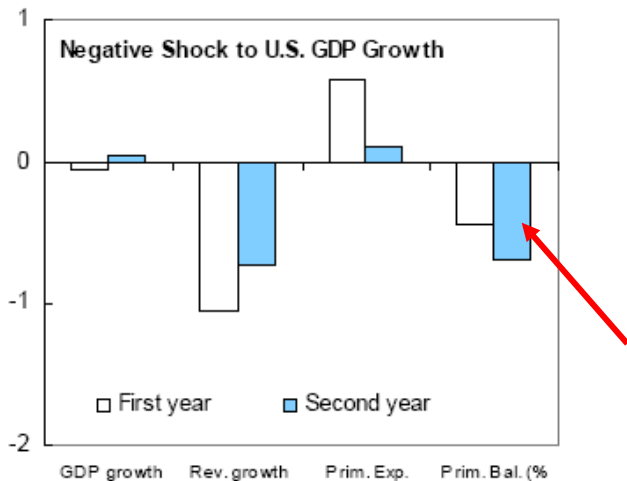
6. Arrears and off-budget items

• The Minister also has to deal with a large ongoing deficit in a number of State-owned enterprises . These additional elements amount to almost 2% of GDP and so are almost as large as the total health budget

•These un-financed deficits in state companies are an additional claim on scarce budgeted resources.

• Addressing these losses as well as various arrears of payment *absorb a significant further slice of* a year's domestic budget revenues.

	2004/05 Act.	2005/06 Bgt proj.	2005/06 Prel.	2006/07 Bgt proj.
	(In percent of GDP)			
Public sector entity balance	-0.7	-0.4	-0.1	-1.9
Selected public entities 2/	0.1	0.3	1.2	-1.4
Three large loss-makers	-1.5	-1.1	-1.4	-0.8
Air Jamaica	-1.2	-0.9	-1.1	-0.7
Sugar Company of Jamaica	-0.1	0.0	-0.2	-0.1
Urban Transit Corporation	-0.1	-0.2	-0.1	0.0
Other public entities	0.7	0.3	0.2	0.2

Counter-cyclical policies and the budget

Negative Shock to U.S. GDP Growth

□ First year   ■ Second year

GDP growth   Rev. growth   Prim. Exp.   Prim. Bal. (%

2 Percentage Points Decline in U.S Treasury Bill Real Interest Rate

□ First year
■ Second year

GDP growth   Rev. growth   Prim. Exp. growth   Prim. Bal. (% GDP)

The Minister would like to run counter-cyclical fiscal policy to protect Jamaica's income levels from the global crisis. BUT the constraints mentioned already give him very little scope to do this without (i) precipitating a ballooning of debt to unfeasible levels and /or (ii) precipating a further bout of inflation and ER depreciation. This could be more damaging than slower growth for living standards of the vulnerable!

Note also : the impacts to absorb from the USA economic difficulties

The Minister's Dilemma – Summary of the main Pressures

- Jamaica was in an extremely constrained position BEFORE the global crisis

    - Mainly because if extraordinarily high debt

    - But also because of difficult inflation history

- The scope for two main ways of financing the deficit is very limited

    - Monetary Financing (because of the inflation record)

    - Borrowing (because of high existing stock of debt and the high rates of interest)

- So the scope for using counter-cyclical policies to mitigate the global recession is severely constrained.

....Continued

•High tax revenues appear to provide large amounts of fiscal space but that is illusory because of:
• large pre-emption by debt service and other non-discretionary payments
• erosion due to crisis – partly via counter cyclical policies

• The flexible exchange rate provides certain advantages but:
    ongoing depreciation can raise the budgetary burden of the existing debt
    • avoidance of depreciation is another reason for eschewing the use of monetary financing of deficits.

Last Words

It is extraordinarily easy for low-income countries to defend social expenditures in the short term by adopting a variety of rash macroeconomic policies:

– high rates of inflation
– excessive external borrowing at relative high interest cost
– excessive voluntary internal borrowing at high interest rates
– substantial *involuntary* internal borrowing based on raids on banks, pension funds, civil servants pay etc
– various other controls designed to direct more resources to the budget

BUT all these short term devices fail the economy and especially poor people eventually (and often quite quickly), via

– the draconian monetary and fiscal polices that become necessary to eliminate high inflation and excessive debts.
– the tight budgets this year needed to pay back the non-payments of previous years
– the output losses caused by controls that impede efficient productive activity

EVENTUALLY the macroeconomic constraints and realities MUST hold – even low-income countries protect their poor best by recognising this on an ongoing basis.

BUT there is scope to be a bit more flexible than official (and IMF) macro policies have been in the past PROVIDED THAT THE CONSTRAINTS ARE PROPERLY RECOGNISED AND FACTORED IN MORE THAN NOW TO SECTORAL ADVOCACY OF INCREASED SPENDING.