

# Fiscal policy and public debt

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2012



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# Course outline

Fiscal policy and  
public debt

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Fiscal policy  
ST stabilization  
Redistribution

Public finance  
Revenues  
Expenditures  
Balance  
Sovereign debt

Sovereign debt  
sustainability  
Debt relief  
The DSF  
Going beyond  
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Conclusion

- 1 Fiscal policy
  - ST stabilization
  - Redistribution
- 2 Public finance
  - Revenues
  - Expenditures
  - Balance
  - Sovereign debt
- 3 Sovereign debt sustainability
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# Purpose of this sequence 1/3

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Fiscal policy is at the heart of almost all development policy issues

- finance public goods
- stabilization policy
- redistribution policy
- financial crises
- sovereign defaults
- systemic risk and too-big-too fail
- hyperinflation
- resource management



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# Purpose of this sequence 2/3

Main example: Sénégal. 3rd review under the PSI, June 26th, 2012, IMF

Table 1. Senegal: Selected Economic and Financial Indicators, 2009–17

	2009	2010	2011		2012		2013	2014	2015	2016	2017
			EBF/ 11/176	Actual	EBF/ 11/176	Proj.			Proj.		
(Annual percentage change)											
National income and prices											
GDP at constant prices	2.1	4.1	4.0	2.6	4.4	3.9	4.8	5.1	5.4	5.5	5.5
Of which: nonagriculture GDP	0.8	4.0	4.0	4.8	4.5	3.2	4.6	5.1	5.5	5.6	5.7
GDP deflator	-1.4	1.4	3.4	4.3	2.9	2.2	2.4	2.5	2.6	2.5	2.6
Consumer prices											
Annual average	-1.7	1.2	3.4	3.4	2.5	2.5	2.1	2.1	2.1	2.1	2.1
End of period	-3.4	4.3	2.7	2.7	2.3	2.2	2.1	2.1	2.1	2.1	2.1
External sector											
Exports, f.o.b. (CFA francs)	0.2	8.3	3.3	10.1	7.9	3.2	5.1	5.3	6.6	9.0	9.4
Imports, f.o.b. (CFA francs)	-22.4	3.8	8.1	11.5	9.4	9.0	1.0	4.0	3.9	7.7	8.4
Export volume	33.4	5.8	10.3	-2.1	4.1	0.4	5.5	5.8	6.1	6.1	6.1
Import volume	-2.6	-0.9	5.0	3.5	8.7	4.7	2.4	5.3	5.4	5.8	5.7
Terms of trade ("=" = deterioration)	6.4	-1.4	-5.7	4.6	0.8	-4.4	1.0	0.4	1.8	0.9	0.8
Nominal effective exchange rate	0.4	-4.5	...	1.4	...	...	...	...	...	...	...
Real effective exchange rate	-2.3	-6.2	...	1.1	...	...	...	...	...	...	...
(Changes in percent of beginning-of-year broad money, unless otherwise indicated)											
Money and credit											
Net domestic assets	8.1	8.3	7.2	9.0	13.4	7.8	...	...	...	...	...
Domestic credit	6.8	10.9	11.3	10.3	12.9	7.0	...	...	...	...	...
Credit to the government (net)	4.2	4.0	5.5	-1.8	5.2	1.7	...	...	...	...	...
Credit to the economy (percentage growth)	3.6	10.4	8.9	18.6	12.4	5.6	...	...	...	...	...
(Percent of GDP, unless otherwise indicated)											
Government financial operations											
Revenue	18.6	19.4	20.2	20.2	21.1	20.7	20.7	20.7	20.8	20.5	20.6
Grants	3.0	2.5	2.4	2.2	2.3	2.7	2.6	2.6	2.6	2.6	2.5
Total expenditure and net lending	26.7	27.1	28.8	29.0	28.9	29.8	28.0	27.6	27.3	26.9	26.9
Overall fiscal surplus (+) or deficit (-)	-7.9	-7.8	-8.6	-8.9	-7.8	-9.1	-7.3	-6.9	-6.5	-6.4	-6.2
Payment order basis, excluding grants	-4.8	-5.2	-6.2	-6.7	-5.6	-6.4	-4.7	-4.3	-3.9	-3.8	-3.7
Payment order basis, including grants	-4.1	-4.2	-5.1	-5.2	-4.1	-4.9	-3.2	-2.7	-2.4	-2.3	-2.1
Primary fiscal balance <sup>1</sup>											
Gross domestic investment	26.3	29.7	30.7	28.7	32.5	30.8	29.9	30.1	30.7	30.6	30.6
Government	10.1	11.6	10.8	10.5	12.7	12.6	11.8	11.7	12.1	11.9	11.8
Nongovernment	19.2	18.2	19.8	18.2	19.8	18.2	18.3	18.4	18.6	18.7	18.8
Gross domestic savings	12.4	14.2	13.0	12.2	14.3	12.8	13.9	14.7	15.8	16.4	16.9
Government	5.8	7.3	5.9	5.4	8.7	7.7	8.5	9.0	9.7	9.6	9.7
Nongovernment	6.6	6.9	7.1	6.8	5.6	5.1	5.4	5.7	6.1	6.8	7.3
Gross national savings	22.6	25.3	22.9	22.3	23.3	22.5	23.2	23.7	24.4	24.3	24.4
External current account balance											
Including current official transfers	-6.7	-4.4	-7.9	-6.4	-9.2	-8.3	-6.7	-6.4	-6.3	-6.3	-6.2
Excluding current official transfers	-7.5	-5.4	-8.8	-7.1	-10.1	-8.9	-7.2	-7.0	-6.9	-6.8	-6.8
Total public debt	34.2	35.7	38.4	40.8	40.5	44.8	46.5	47.5	48.0	48.3	48.3
Central government domestic debt	7.2	8.2	10.6	11.3	11.5	12.2	12.2	12.2	12.1	12.0	11.7
External public debt	26.9	27.5	27.8	29.5	28.9	32.6	34.3	35.3	35.9	36.3	36.6
External public debt service											
Percent of exports	5.0	5.7	12.5	13.8	7.3	7.4	7.6	6.7	7.5	7.2	6.9
Percent of government revenue	6.6	7.4	14.7	17.2	8.1	8.7	8.7	7.4	8.1	8.0	7.7
Gross domestic product (CFAF billions)	6,029	6,309	6,837	6,818	7,346	7,243	7,779	8,374	9,055	9,791	10,599

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The “supplementary document to the action fiche and payment dossier” requires that you

- establish policy needs which can be addressed by an adequate fiscal policy (part 2)
- assess the fiscal stance of a developing country and formulate recommendations (part 1).

Furthermore,

- fiscal policy is at the heart of the policy dialog with local authorities.



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# Purposes of the fiscal policy

Beyond macroeconomic policy

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## Non economic purposes

- protecting the state's territorial integrity
- provide security for its citizens both at home and abroad

## Economic purposes

- Stabilization (countercyclical policy)
- Redistribution
- but also finance regulatory institutions, courts, administrations etc.

# Is there a stabilizing role for fiscal policy?

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## Fiscal policy **ST stabilization** Redistribution

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## Conclusion

- Production  $\implies$  Demand
- Demand  $\implies$  Opportunities for the supply sector



# Theoretical impact of a fiscal stimulus

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At equilibrium, an increase in public demand

- crowds out private demand
  - cost of funding rises
  - prices rise
- is also addressed to imports, which crowd out local production

In the short-term

- supply elasticity and price rigidity  $\implies$ 
  - demand shocks affect directly the productive sector
  - with potentially devastating consequences

# Fiscal policy as a tool for redistribution

## Fiscal policy and public debt

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## Fiscal policy ST stabilization Redistribution

## Public finance Revenues Expenditures Balance Sovereign debt

## Sovereign debt sustainability

## Debt relief The DSF Going beyond the DSF

## Conclusion

- insurance against health hazard / unemployment
- retirements schemes / pensions
- redistribution along income lines
  - macroeconomics: from the wealthy to the less wealthy
    - progressive taxation and provision of public goods
    - subsidies on goods of varying necessity
  - political economy: appropriation by the more powerful



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# Public financial operations

## Senegal unless explicitly mentioned

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### Conclusion

	2009	2010	2011		2012		2013	2014	2015	2016	2017
			EBS/ 11/176	Actual	EBS/ 11/176	Prog.			Proj.		
	(Percent of GDP)										
Total revenue and grants	21.7	22.0	22.6	22.4	23.4	23.4	23.3	23.4	23.4	23.1	23.1
Revenue	18.6	19.4	20.2	20.2	21.1	20.7	20.7	20.7	20.8	20.5	20.6
Tax revenue	18.0	18.8	19.0	18.9	20.0	19.5	19.2	19.3	19.4	19.5	19.6
Income tax	4.8	5.3	5.2	5.1	5.2	5.2	4.9	5.0	5.1	5.2	5.2
Taxes on goods and services	10.2	10.9	10.6	10.7	11.6	11.5	10.7	10.9	11.0	11.1	11.1
Taxes on petroleum products	3.0	2.6	3.2	3.1	3.2	2.8	3.6	3.4	3.3	3.3	3.3
Nontax revenue	0.6	0.7	0.7	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0
FSE			0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.0	0.0
Grants	3.0	2.5	2.4	2.2	2.3	2.7	2.6	2.6	2.6	2.6	2.5
Total expenditure and net lending <sup>1</sup>	26.7	27.1	28.8	29.0	28.9	29.8	28.0	27.6	27.3	26.9	26.8
Current expenditure	16.5	15.6	17.4	18.1	16.3	17.3	16.4	16.0	15.2	15.0	15.0
Wages and salaries	6.0	6.2	6.1	6.3	6.0	6.2	6.0	6.0	6.0	6.0	6.0
Interest payments	0.8	0.9	1.2	1.5	1.5	1.5	1.6	1.6	1.5	1.5	1.5
Other current expenditure	9.7	8.5	10.1	10.3	8.8	9.5	8.8	8.4	7.7	7.5	7.5
Of which: goods and services	4.8	4.6	5.1	5.2	5.2	5.1	4.9	4.8	4.7	4.7	4.7
Of which: transfers and subsidies	4.7	3.8	4.8	4.9	3.4	4.3	3.7	3.4	2.8	2.7	2.7
Of which: energy and food subsidies	1.0	0.0	2.0	2.0	0.6	1.6	1.0	0.7	0.1	0.0	0.0
HIPC and MDRI current spending	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Capital expenditure <sup>2</sup>	10.1	11.6	10.9	10.5	12.7	12.6	11.6	11.7	12.1	11.9	11.8
Domestically and nonconcessionally financed	6.1	6.9	6.8	7.0	7.6	7.0	6.5	6.6	7.2	7.1	7.2
Externally (concessionally) financed	3.9	4.7	4.1	3.6	5.2	5.6	5.1	5.1	5.0	4.8	4.6
Net lending	0.1	0.0	0.5	0.4	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0
Selected public sector entities balance <sup>3</sup>	0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Primary fiscal balance	-4.1	-4.2	-5.1	-5.2	-4.1	-4.9	-3.2	-2.7	-2.4	-2.3	-2.1
Overall fiscal balance											
Payment order basis, excluding grants	-7.9	-7.8	-8.6	-8.9	-7.8	-9.1	-7.3	-6.9	-6.5	-6.4	-6.2
Payment order basis, including grants	-4.8	-5.2	-6.2	-6.7	-5.6	-6.4	-4.7	-4.3	-3.9	-3.8	-3.7
Financing	4.8	5.2	6.2	6.7	5.6	6.4	4.7	4.3	3.9	3.8	3.7
External financing	3.7	2.7	4.7	6.2	3.6	5.4	5.1	4.4	4.2	4.1	4.0
Domestic financing	2.6	2.7	1.6	0.2	2.0	1.4	-0.4	-0.1	-0.3	-0.3	-0.3
Settlement of payment delays	-1.6	-0.2	-0.1	0.3	0.0	-0.4	0.0	0.0	0.0	0.0	0.0
Errors and omissions	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

# Revenue vs. financing vs. monetizing the deficit

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Expenditures can be funded through several means

- raising tax and nontax revenue
- borrowing from banks and markets
- printing money

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# Revenue

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	2009	2010	2011		2012	
			EBS/ 11/176	Actual	EBS/ 11/176	Prog.
	(Percent of GDP)					
Total revenue and grants	21.7	22.0	22.6	22.4	23.4	23.4
Revenue	18.6	19.4	20.2	20.2	21.1	20.7
Tax revenue	18.0	18.8	19.0	18.9	20.0	19.5
Income tax	4.8	5.3	5.2	5.1	5.2	5.2
Taxes on goods and services	10.2	10.9	10.6	10.7	11.6	11.5
Taxes on petroleum products	3.0	2.6	3.2	3.1	3.2	2.8
Nontax revenue	0.6	0.7	0.7	0.7	0.7	0.7
FSE			0.6	0.6	0.5	0.5
Grants	3.0	2.5	2.4	2.2	2.3	2.7



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# Various forms of revenue

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- tax revenue
  - trade tax – usually on imports
  - tax on corporations
  - income tax
  - wealth tax
  - VAT
- nontax revenue
  - sale or lending of fixed assets
  - royalties from mineral extraction
- coinage
- grants

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# Grants: aid dependence

The case of Rwanda

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	2008/09	2009/10	2010/11	2011/12	2011/12	2012/13
				Country Report		Country Report
			Prel.	No. 12/15	Rev. Proj	No. 12/15
	(Percent of fiscal year GDP)					
Revenue and grants	24.3	25.7	24.5	25.2	25.1	24.5
Total revenue	14.9	12.6	13.7	14.1	13.8	14.2
Tax revenue	13.1	12.1	13.1	13.0	12.7	13.5
Direct taxes	4.7	4.8	5.1	5.2	5.0	5.5
Taxes on goods and services	6.5	6.3	6.9	6.8	6.6	7.1
Taxes on international trade	1.9	1.0	1.1	1.0	1.0	0.9
Nontax revenue	1.9	0.5	0.6	1.1	1.1	0.7
Grants	9.3	13.2	10.7	11.1	11.3	10.3
Budgetary grants	6.0	9.1	6.1	6.5	6.8	6.3
Capital grants	3.3	4.1	4.6	4.6	4.5	4.0
Of which: Global Fund	...	...	0.0	1.8	1.7	1.4



# Public expenditure

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	2009	2010	2011		2012	
			EBS/ 11/176	Actual	EBS/ 11/176	Prog.
	(Percent of GDP)					
Total expenditure and net lending <sup>1</sup>	26.7	27.1	28.8	29.0	28.9	29.8
Current expenditure	16.5	15.6	17.4	18.1	16.3	17.3
Wages and salaries	6.0	6.2	6.1	6.3	6.0	6.2
Interest payments	0.8	0.9	1.2	1.5	1.5	1.5
Other current expenditure	9.7	8.5	10.1	10.3	8.8	9.5
Of which: goods and services	4.8	4.6	5.1	5.2	5.2	5.1
Of which: transfers and subsidies	4.7	3.8	4.8	4.9	3.4	4.3
Of which: energy and food subsidies	1.0	0.0	2.0	2.0	0.6	1.6
HIPC and MDRI current spending	0.1	0.2	0.2	0.2	0.2	0.2
Capital expenditure <sup>2</sup>	10.1	11.6	10.9	10.5	12.7	12.6
Domestically and nonconcessionally financed	6.1	6.9	6.8	7.0	7.6	7.0
Externally (concessionally) financed	3.9	4.7	4.1	3.6	5.2	5.6
Net lending	0.1	0.0	0.5	0.4	-0.1	-0.1

# Various categories of expenditures

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Conclusion

- Current expenditures
  - Essentially: civil servants payroll
  - Other public consumption
  - Subsidies
  - Social security
  - Interest payments
- Capital expenditures

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# Fiscal balance

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Total revenue and grants	21.7	22.0	22.6	22.4	23.4	23.4
Total expenditure and net lending <sup>a</sup>	26.7	27.1	28.8	29.0	28.9	29.8
Primary fiscal balance	-4.1	-4.2	-5.1	-5.2	-4.1	-4.9
Overall fiscal balance						
Payment order basis, excluding grants	-7.9	-7.8	-8.6	-8.9	-7.8	-9.1
Payment order basis, including grants	-4.8	-5.2	-6.2	-6.7	-5.6	-6.4



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# Other balances

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## ■ Primary balance

$$\text{Primary balance} = \text{Fiscal balance} + \text{Interest payments}$$

... in other words the primary balance, as the fiscal balance, subtracts from all revenues all expenditures *except* interest payments on outstanding debt

## ■ Consolidated public balance

... may include public companies, local administrations etc.



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# Financing a deficit

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## The state can borrow

- from banks or on financial markets (bondholders)
- from domestic or international creditors
- from private or public creditors (multilateral development banks, IMF, EC, bilateral agencies)
- at concessional or commercial interest rates
- in local or foreign currency, at different maturities.

# World Bank's lending to developing countries

Fiscal policy and  
public debt

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Fiscal policy  
ST stabilization  
Redistribution

Public finance

Revenues  
Expenditures  
Balance

Sovereign debt

Sovereign debt  
sustainability

Debt relief  
The DSF  
Going beyond  
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Conclusion

- Lending groups: IDA, IBRD, blend
- Two criteria are used to determine which countries can access IDA resources:
  - Relative poverty
  - Lack of creditworthiness
- IDA financing is deeply concessional
- IBRD loans are nonconcessional
- Blend countries
  - low per capita incomes
  - financially creditworthy



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# Developing countries' classification

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Conclusion

Low-income economies (40)		
Afghanistan	Haiti	Rwanda
Bangladesh	Kenya	Sierra Leone
Benin	Korea, Dem Rep.	Solomon Islands
Burkina Faso	Kyrgyz Republic	Somalia
Burundi	Lao PDR	Tajikistan
Cambodia	Liberia	Tanzania
Central African Republic	Madagascar	Togo
Chad	Malawi	Uganda
Comoros	Mali	Zambia
Congo, Dem. Rep.	Mauritania	Zimbabwe
Eritrea	Mozambique	
Ethiopia	Myanmar	
Gambia, The	Nepal	
Ghana	Niger	
Guinea		
Guinea-Bissau		

Lower-middle-income economies (56)		
Angola	Guyana	Pakistan
Armenia	Honduras	Papua New Guinea
Belize	India	Paraguay
Bhutan	Indonesia	Philippines
Bolivia	Iraq	Samoa
Cameroon	Jordan	Sao Tomé and Príncipe
Cape Verde	Kiribati	Senegal
China	Kosovo	Sri Lanka
Congo, Rep.	Lesotho	Sudan
Côte d'Ivoire	Maldives	Swaziland
Djibouti	Marshall Islands	Syrian Arab Republic
Ecuador	Micronesia, Fed. Sts.	Thailand
Egypt, Arab Rep.	Moldova	Timor-Leste
El Salvador	Mongolia	Tonga
Georgia	Morocco	Tunisia
Guatemala	Nicaragua	Tuvalu
		Ukraine
		Uzbekistan
	Nigeria	Vanuatu
		Vietnam
		West Bank and Gaza
		Yemen

Upper-middle-income economies (48)		
Albania	Grenada	Peru
Algeria	Iran	
American Samoa	Jamaica	Romania
Antigua and Barbuda	Kazakhstan	
Argentina		Russian Federation
Azerbaijan	Lebanon	Serbia
Belarus	Libya	Seychelles
Bosnia and Herzegovina	Lithuania	South Africa
Botswana	Macedonia	St. Kitts and Nevis
Brazil	Malaysia	St. Lucia
Bulgaria	Mauritius	St. Vincent and the Grenadines
Chile	Mayotte	Suriname
Colombia	Mexico	Turkey
Costa Rica	Montenegro	Uruguay
Cuba	Namibia	Venezuela, RB
Dominica	Palau	
Dominican Republic		
Fiji	Panama	
Gabon		



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# Lending terms

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Conclusion

- Debt NPV: discounted sum of future debt service flows
- Discount rate: supposed to reflect the market interest rate
- Grant element:  $\frac{(\text{facevalue} - \text{NPV})}{\text{facevalue}}$
- Example: USD 100M loan. Maturity = 15 years, Grace Period = 5 years, Interest Rate = 1%. If discount rate = 5%, what is the grant element ?

Year	Capital Remaining Due	Capital Repayment	Interest Payment	Total Debt Service	Present Value
1	100	0	1	1	0,95
2	100	0	1	1	0,91
3	100	0	1	1	0,86
4	100	0	1	1	0,82
5	100	0	1	1	0,78
6	100	10	1	11	8,21
7	90	10	0,9	10,9	7,75
8	80	10	0,8	10,8	7,31
9	70	10	0,7	10,7	6,90
10	60	10	0,6	10,6	6,51
11	50	10	0,5	10,5	6,14
12	40	10	0,4	10,4	5,79
13	30	10	0,3	10,3	5,46
14	20	10	0,2	10,2	5,15
15	10	10	0,1	10,1	4,86





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# Course outline

## Fiscal policy and public debt

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Redistribution

Public finance  
Revenues  
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Sovereign debt

## Sovereign debt sustainability

Debt relief  
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Conclusion

- 1 Fiscal policy
- 2 Public finance
- 3 Sovereign debt sustainability
  - Debt relief
  - The DSF
  - Going beyond the DSF
- 4 Conclusion



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# Debt restructurings

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Conclusion

- 1956: the Paris Club
- Late 1970s: the London Club
- Shift to heterogeneous sovereign bondholders with no collective action mechanism
- 1989: Brady Plan (17 countries)



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# HIPC initiative

75\$ billions in 2009 \$ and in NPV terms

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Conclusion

- HIPC Initiative: comprehensive approach to debt reduction for heavily indebted poor countries.
- Launched in 1996 by the IMF and World Bank + Enhanced Initiative in 1999.
  - IDA-only and PRGF-eligible
  - face an unsustainable debt burden, beyond traditionally available debt-relief mechanisms
  - establish a track record of reform and sound policies through IMF- and IDA-supported programs
  - have developed a Poverty Reduction Strategy Paper (PRSP) through a participatory process.
- If criteria are met: *decision point* where the country begins receiving interim relief on its debt service falling due, then *completion point*

- 35 countries have reached the completion point:

Afghanistan, Benin, Bolivia, Burkina Faso, Burundi, Cameroon, Central African Republic, Comoros, Congo R.D., Congo R., Côte d'Ivoire, Ethiopia, Gambia, Ghana, Guinea, Guinea Bissau, Guyana, Haiti, Honduras, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Nicaragua, Niger, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Tanzania, Togo, Uganda, Zambia

- 1 country has not reached the completion point, but have reached the decision point:

Chad

- 3 more eligible countries:

Eritrea, Somalia, Sudan

# The MDR Initiative

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Conclusion

- Debt relief from three multilateral institutions, the IMF, IDA and the African Development Fund (AfDF): cancel 100 percent of their debt claims on countries that have reached the completion point under HIPC Initiative .
- In 2007, the Inter-American Development Bank also decided to provide similar debt relief to the five HIPC's in the Western Hemisphere.
- Eligibility: all countries that reach the completion point under the enhanced HIPC Initiative and those with per capita income below US\$380.
- Cost: US\$50 billion (face value) by end-March 2009



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# Debt relief in Cameroon

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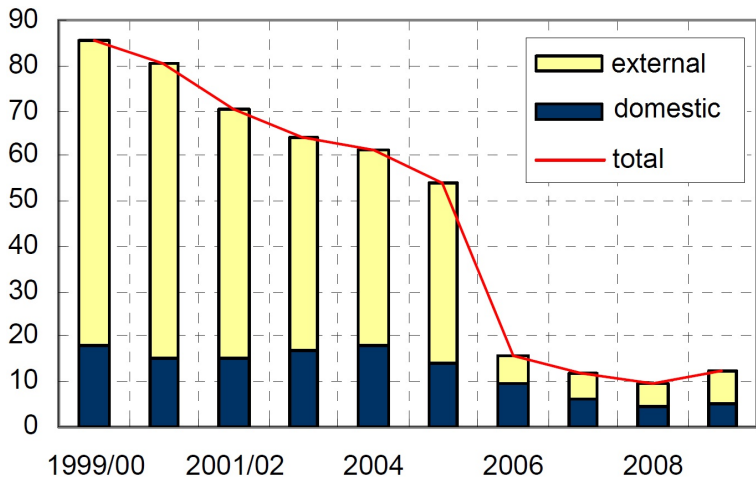
Revenues  
Expenditures  
Balance  
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**Debt relief**

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# Debt relief overall

WB, end 2011, for the 36 post decision point countries

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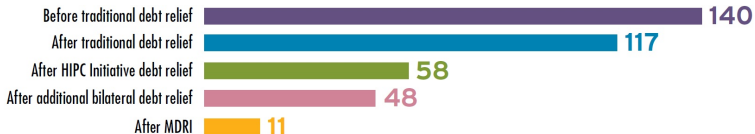
Revenues  
Expenditures  
Balance  
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# What to expect from debt relief?

debt service - resources release - priorities in expenditures

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Conclusion

- Debt relief meant to be accompanied by an increase in poverty-reducing expenditures, such as health, rural infrastructure and education
- Debt relief associated with IMF programs of reform
- Empirically
  - No effect of debt relief on growth or change in government spending
  - evidence of an effect on government spending on health and education : conditionalities associated with HIPC debt relief?



# Solvency and Willingness-to-pay

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Conclusion

- Enforcement issue: no collateral in the international sovereign bond market
- Incentive-compatibility constraint of debt repayment  $\neq$  intertemporal solvency constraint

But SOLVENCY remains important

- Debt overhang
- Crowding out effect on other expenditures
- Default is a bad signal for foreign investors
- Debt restructurings are extremely costly



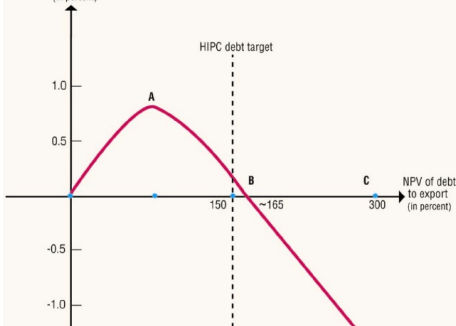
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# The debt overhang theory

- Neoclassical theory: decreasing returns to capital favorable to funding investment in DCs
- But debt service on previous debt diverts funds from more productive investment
- The debt overhang literature empirically established a “Debt Laffer curve”

## Stylized shape of the non-linear relation between debt and growth

Contribution of debt to annual  
per-capita output growth  
(in percent)





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# Early Warning Signals

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Conclusion

- Triggers of debt crises  $\implies$  better future debt distress events
- Usual suspects:
  - solvency indicators (Debt/Revenues)
  - liquidity variables (short-term debt, debt service due)
- Benchmark with “acceptable” values: static solvency analysis
- Problems:
  - static has limitations vs. intertemporal
  - how to find these “acceptable” values ?



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# The Debt Sustainability Framework

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Conclusion

- After the HIPC-I and the MDR-I: concern to avoid overborrowing on the part of LICs
- Focus on solvency vs. overborrowing
- Joint IMF/WB DSA: Benchmark scenario of (external / public) debt projections
- Stress tests affecting the evolution of the debt path
- Policy-dependent thresholds

- IMF (2001), “Guidelines for Public Debt Management”, IMF and the WB, March
- IMF (2002), “Assessing Sustainability”, IMF, SM/02/166, May
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- IMF (2005b), “Information Note on Modifications to the Fund’s Debt Sustainability Assessment Framework for Market Access Countries”, IMF, July
- Akyüz Y. (2007), “Debt Sustainability in Emerging Markets: A Critical Appraisal”, Workshop on Debt, Finance and Emerging Issues in Financial Integration, UN Department of Economic and Social Affairs, DESA Working Paper, n°61, ST/ESA/2007/DWP/61, November.
- IMF (2012), “Revisiting the Debt Sustainability Framework for Low-Income Countries”, IMF and the WB, January
- <http://www.imf.org/external/pubs/ft/dsa/lic.aspx>

# The importance of institutions in a DSA

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Conclusion

- The DSF sets a debt ceilings beyond which risk of default is deemed excessive
- Ceiling depends on the quality of their economic policies and institutions, as measured by the CPIA
- 3 groups: weak, medium and strong capacity with differentiated debt ceiling:

	NPV of debt stock in % of			Debt service in % of	
	Exports	GDP	Fiscal revenues	Exports	Fiscal revenues
Weak CPIA<3.25	100	30	200	15	25
3.25<MediumCPIA<3.75	150	40	250	20	30
Strong CPIA>3.75	200	50	300	25	35



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# Role of the DSF

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Conclusion

- At the heart of the financing policy of IDA and its loans/grants mix.
- 4 categories:
  - 1 Countries in debt crisis
  - 2 Countries at high risk of debt distress (red light)
  - 3 Countries at medium risk of debt crisis (yellow light)
  - 4 Countries at low risk of debt crisis (green light)
- AfDB, ADB, IADB, EBRD, EIB, IFAD, and Paris Club restructurings all rely on the DSA
- debt limits for concessionality requirements under IMF programs



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# The baseline scenario of the DSF

## Fiscal policy and public debt

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	Actual			Estimate		Projections						
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2021	2030	
Public sector debt 1/	25.0	34.6	35.9	41.1	43.0	44.4	45.5	46.1	46.2	46.0	45.3	
o/w foreign-currency denominated	19.7	27.0	27.5	30.8	32.1	32.4	33.5	34.5	35.0	36.7	31.4	
Change in public sector debt	0.5	9.6	1.3	5.2	1.8	1.4	1.1	0.5	0.1	-0.1	-0.1	
Identified debt-creating flows	3.2	3.0	5.4	4.5	2.9	1.9	1.4	0.8	0.4	0.2	0.0	
Primary deficit	4.2	4.3	4.3	5.8	4.3	3.3	2.9	2.3	2.4	2.3	2.2	
Revenue and grants	21.7	21.7	22.0	22.8	22.7	22.7	22.8	23.0	22.6	23.0	23.4	
of which: grants	2.3	3.0	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.0	
Primary (noninterest) expenditure	25.9	25.9	26.2	28.6	26.9	26.0	25.8	25.3	25.0	25.3	25.6	
Automatic debt dynamics	-0.4	-0.9	1.4	-1.3	-1.3	-1.5	-1.5	-1.5	-2.0	-2.1	-2.2	
Contribution from interest rate/growth differential	-0.9	0.2	-0.9	-1.1	-1.2	-1.4	-1.6	-1.7	-1.8	-2.1	-2.2	
of which: contribution from average real interest rate	-0.1	0.7	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.4	0.5	
of which: contribution from real GDP growth	-0.8	-0.5	-1.4	-1.5	-1.9	-2.0	-2.2	-2.4	-2.4	-2.5	-2.7	
Contribution from real exchange rate depreciation	0.5	-1.0	2.3	-0.3	-0.1	0.0	0.0	0.2	-0.2	...	...	
Other identified debt-creating flows	-0.6	-0.3	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Privatization receipts (negative)	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Debt relief (HIPC and other)	-0.3	-0.3	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes	-2.7	6.5	-4.1	0.7	-1.1	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	
Other Sustainability Indicators												
PV of public sector debt	28.4	34.3	35.7	36.3	36.9	36.9	36.7	36.8	38.9			
o/w foreign-currency denominated	...	...	20.0	24.0	24.8	24.3	24.9	25.4	25.5	27.5	25.1	
o/w external	...	...	20.0	24.0	24.8	24.3	24.9	25.4	25.5	27.5	25.1	
PV of contingent liabilities (not included in public sector debt)	...	...	...	...	...	...	...	...	...	...	...	
Gross financing need 2/	7.8	8.0	8.2	12.1	10.9	10.3	10.5	9.6	9.3	9.7	9.3	
PV of public sector debt-to-revenue and grants ratio (in percent)	129.2	150.5	157.3	160.3	161.9	160.7	162.2	159.9	166.2			
PV of public sector debt-to-revenue ratio (in percent)	146.1	168.0	174.7	178.1	179.7	178.3	180.1	177.4	182.1			
o/w external 3/	102.8	117.6	121.4	119.1	121.3	122.6	125.2	132.5	117.2			
Debt service-to-revenue and grants ratio (in percent) 4/	8.2	9.1	9.8	15.6	13.8	13.8	15.0	15.1	15.2	21.4	17.5	
Debt service-to-revenue ratio (in percent) 4/	9.1	10.6	11.1	17.5	15.3	15.3	16.7	16.7	16.9	23.7	19.1	
Primary deficit that stabilizes the debt-to-GDP ratio	3.6	-5.3	2.9	0.6	2.4	1.9	1.8	1.8	2.3	2.4	2.2	



# Alternative scenarios in the DSF for LICs

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	Projections							
	2011	2012	2013	2014	2015	2016	2021	2030
<b>PV of Debt-to-GDP Ratio</b>								
<b>Baseline</b>	34	36	36	37	37	37	37	39
<b>A. Alternative scenarios</b>								
A1. Real GDP growth and primary balance are at historical averages	34	34	35	36	36	37	41	50
A2. Primary balance is unchanged from 2011	34	37	40	43	46	48	61	77
A3. Permanently lower GDP growth 1/	34	36	37	38	38	38	42	53
<b>B. Bound tests</b>								
B1. Real GDP growth is at historical average minus one standard deviations in 2012-2013	34	37	40	41	42	43	47	53
B2. Primary balance is at historical average minus one standard deviations in 2012-2013	34	36	38	38	38	38	38	40
B3. Combination of B1-B2 using one half standard deviation shocks	34	36	37	38	39	39	42	48
B4. One-time 30 percent real depreciation in 2012	34	46	45	45	44	44	42	44
B5. 10 percent of GDP increase in other debt-creating flows in 2012	34	45	45	45	45	44	43	43



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# Main Criticisms

## Fiscal policy and public debt

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Conclusion

- Rising debt-to-GDP ratio not necessarily bad
- CPIA and debt indicators are far from enough!
  - exposure to volatility
  - does not take into account correlated shocks
  - need for a stochastic approach
- does not concern non-DAC donors



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# Debt Intolerance?

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Conclusion

- Sovereign default
  - purely opportunistic?
  - partial (and costly) insurance against adverse economic outcomes?
- Debt intolerance?
  - moderate external debt-to-GDP ratios
  - perceived as riskier  $\implies$  higher spreads / tighter credit conditions
  - Some countries display several occurrences of default

Part 1 of the “supplementary document to the action fiche and payment dossier” organizes ‘key indicators’

- public accounts
  - relevant decomposition of rev. and exp
  - relevant international comparison of levels of rev. and exp.
- sovereign debt sustainability
  - mention default history
  - discuss underlying hypothesis for the tests, suggest limitations

Part 2 discusses the stabilizing nature of economic policy

- does fiscal policy address main vulnerabilities / constraints?
- focus on the fiscal stance and sustainability
- baseline and stress tests scenarios / green-yellow-red light