

Master PPD M1

2008 / 2009

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# Lecture17 – Debt overhang, debt relief and poverty reduction in low-income countries

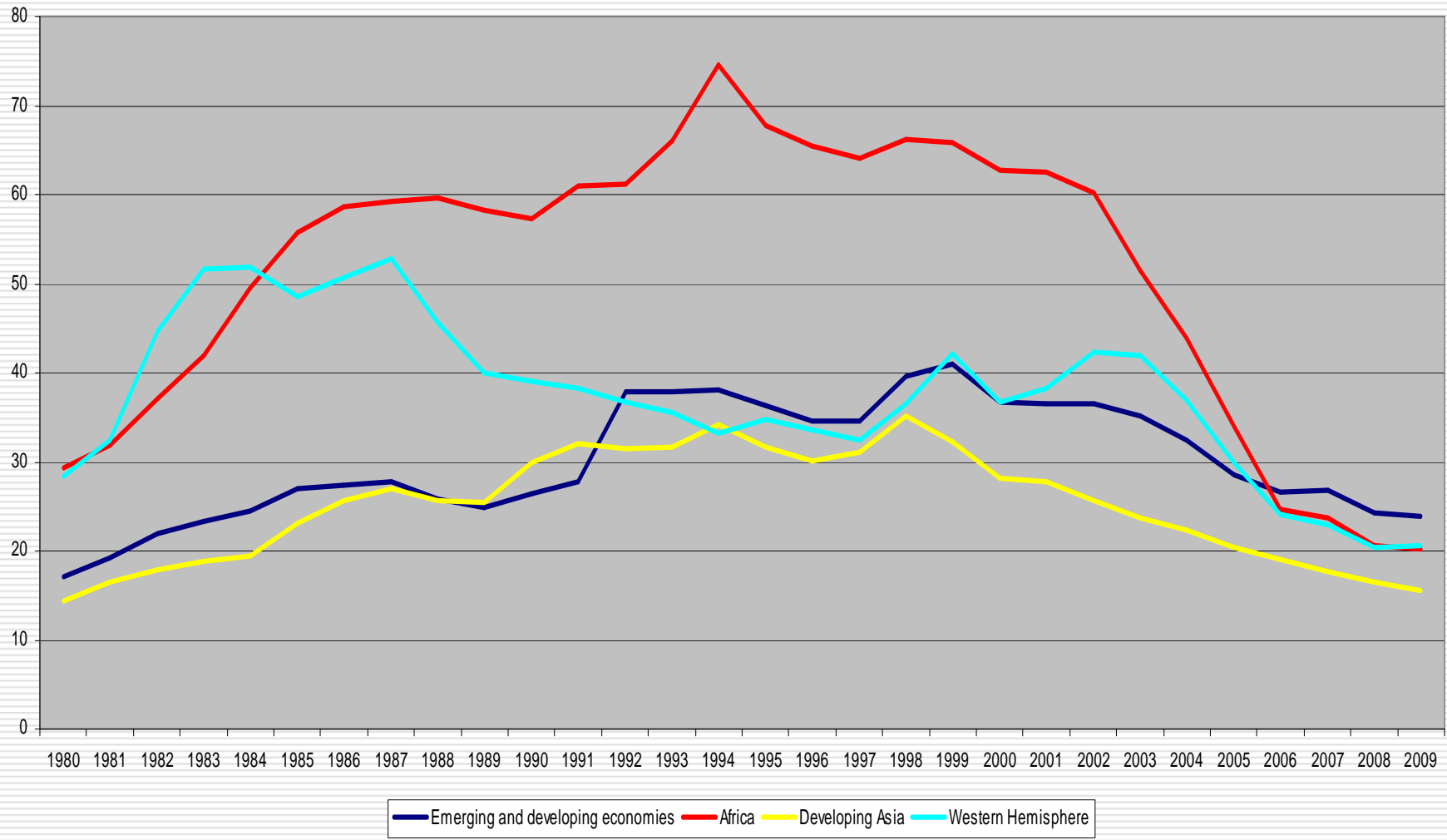
Marc Raffinot. LEDa Université Paris Dauphine

# Outline of the lecture

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- **Some facts, with a focus on Foreign Debt**
  - Why default?
  - Debt overhang
  - Impact of debt relief
  - Debt is not what it used to be
-

Foreign Debt (% of GDP)



Source: IMF

## Foreign debt in \$ billion, current

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	1980	2005
Low Income	93	379
Lower Middle income,	247	1146
Upper Middle income	197	1217
Total	537	2742

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Source: WB, Global Development Finance

# Emerging countries vs LICs

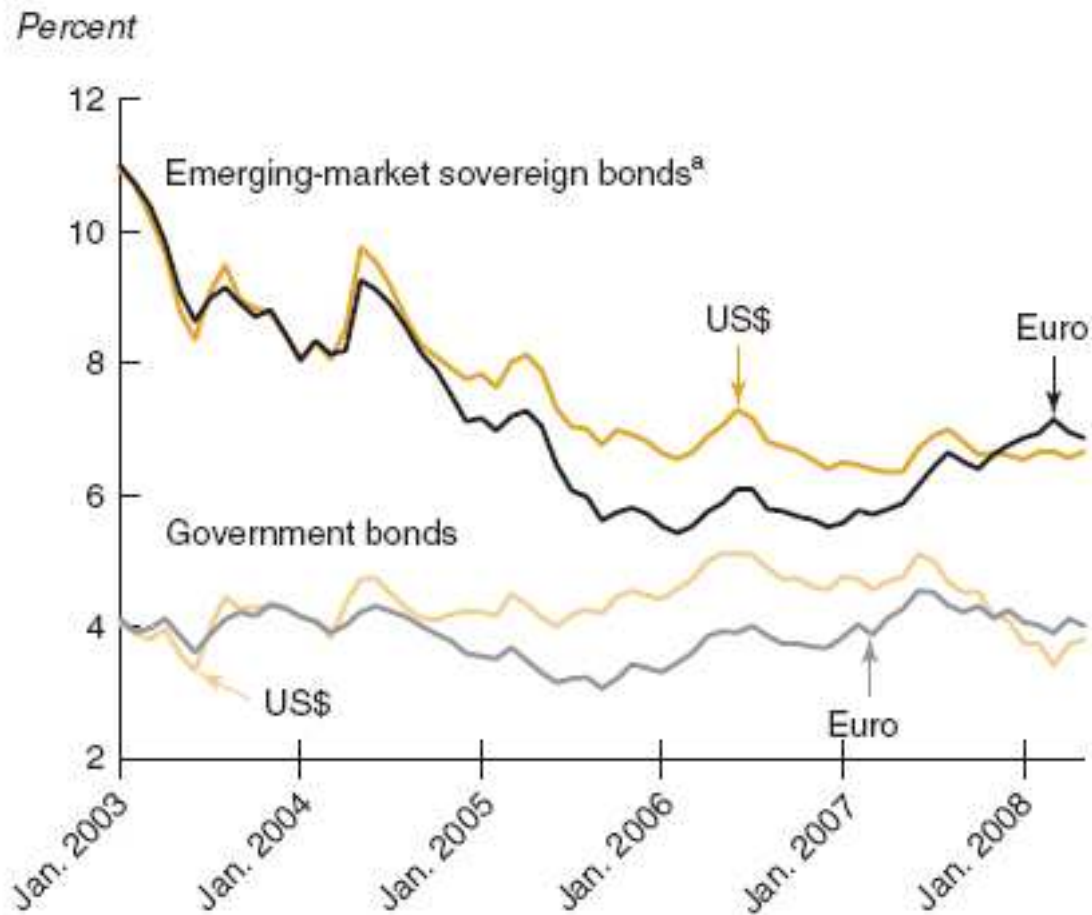
	Emerging	LICs
Creditor	Mainly financial markets, banks	Public (Mainly Multilateral, Bilateral)
Amounts	Large, unstable	Limited, stable
Foreign currency	Yes (original sin), with some exceptions	Yes
Interest rates	Risk free+spread Variable	Concessional, Fixed
Duration	Short and medium term, short grace period	Long term, long grace period
Net Present Value	Higher than face value	Lower than face value
Crises	Outflow of capital	Arrears, grants

# Debt Crises:

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- ❑ Debt crises : 1930s, 1982 (Mexico, Latin America), 1994 (Mexico), 1997 (Asia, Russia), 2000 (Ecuador, Pakistan) 2001 (Turkey, Argentina –without contagion).
  - ❑ Problem with sovereign risk lending : over-enthusiasm, loss of confidence, credit rationing (Kindleberger 1978)
  - ❑ No more crises since 2001 (reserves, macro-management, low spreads)
-

**Figure 2.32 Yields on 10-year government bonds and emerging-market sovereign bond spreads, January 2003 – mid-May 2008**



Source: JPMorgan.

a. Government bond yields plus emerging-market sovereign bond spread (EMBI Global) composite index.

# MICs crises differ

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Who is	Mexico 82	Mexico 94	Asia 97
Creditor?	Banks Official	Banks Markets	Markets Banks
Indebted?	State	State Firms	Banks

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	High debt	Low debt
Non expected crisis (low spread)		Mexico (1994), Korea (1997), Indonesia (1997), Thailand (1997), Venezuela
Expected crisis (high spread)	Brazil (1998), Argentina (2001), Equator (1999)	Turkey (2000-2001), Russia (1998)

Source: Cohen & Portes 2003, p.16-17 and 44-46

# Since 1982 : Increasing difference in the way Creditors deal with DCs' debt

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- MICs (Middle Income Countries) : try to keep access to the international financial market
  - Rescheduling, refinancing (Argentina 56: Paris Club). Debt is repaid at face value
  - Secondary Market: discounted market value, debt buy backs, debt equity swaps, etc.
  - An exception: Brady Plan 1989
- LICs (Low Income Countries) : try to get more debt relief
  - Bilateral (Paris Club)
    - Toronto G7 1988: 33% debt relief, Houston (50%),
    - Naples (1994) : 66 %, flow of stock, Eventually : 90 % (Köln 1999), 100 %
  - Multilateral
    - ~~HIPC 1996, Enhanced HIPC 1999~~
    - MDRI 2005

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# Default: Illiquidity vs Insolvability

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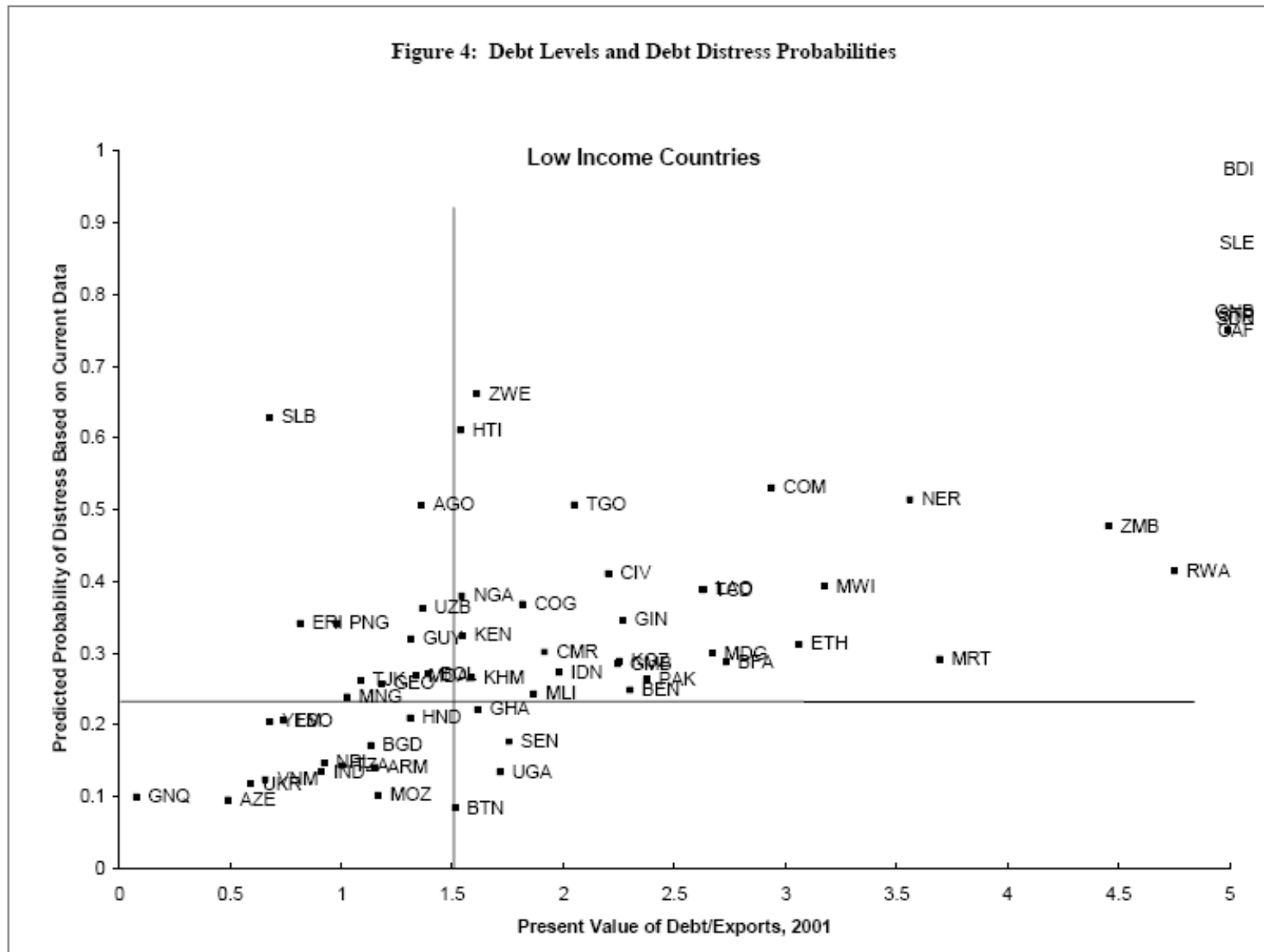
- Illiquidity (cannot repay now but later yes)
    - Creditors: Rescheduling, Refinancing
  - Insolvability (cannot repay now nor later)
    - Creditors: Stop credit,
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# Debt=opportunities and threats

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- Opportunities: leverage effect
  - Threats: Debt may become unsustainable
    - Default results in closing the access to international financial markets
    - And sanctions?
  - The probability of default is linked with the debt ratio, but the debt ratio is not the whole story.
  - Example: Low Income Countries:
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Figure 4: Debt Levels and Debt Distress Probabilities



Source : Kraay et Nehru (2003, p. 38).

# Sustainability

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- Fundamentals:
  - $\partial b / \partial t = (M - X) / Y + b (r - g)$
  - $b$  debt ratio,  $t$  time,  $(M - X)$ : primary deficit (current balance without interests),  $Y$  GDP,  $r$  interest rate,  $g$  growth rate
  - Instability:
    - Shocks on exports, imports (namely oil, food), exchange rate ( $b$ ), interest rates, growth
    - Volatility of capital flows, credit crunch
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# Empirical research: defaults

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- Kraay & Nehru: Debt service/exports, CPIA rating, Real GDP growth.
  - Research on Early Warning Systems (Berg, A., Borensztein, E., Pattillo, C., 2004. "Assessing EarlyWarning Systems: how they have worked in practice". IMF WP No. 52).
  - Sovereign defaults are often caused by fiscal pressures generated by large-scale domestic defaults (Arellano & Kocherlakota, 2008, NBER WP 13794)
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# LICs' Paradox: Default on concessional debt

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- Default is unlikely because of soft conditions. Moreover:
    - IMF conditionality on concessional borrowing
    - Increasing share of grants
    - Good monitoring, small number of public creditors (mainly BWI)
  - Suspects:
    - Low effectiveness of aid
    - Instability, Vulnerability, Terms of Trade
    - Defensive lending
    - Capital flight
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# Burdens 1: debt service

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- Debt service, deficit of the current account, decrease of reserves
    - Traditional approach of sustainability: debt repayment is a problem of resources (example: indicator debt service in the short run / reserves)
  - Traditional approach is not consistent with standard economic approach
  - It may explain the paradox of default with low debt ratios
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# Burden 2: Debt overhang

## The case for voluntary repudiation

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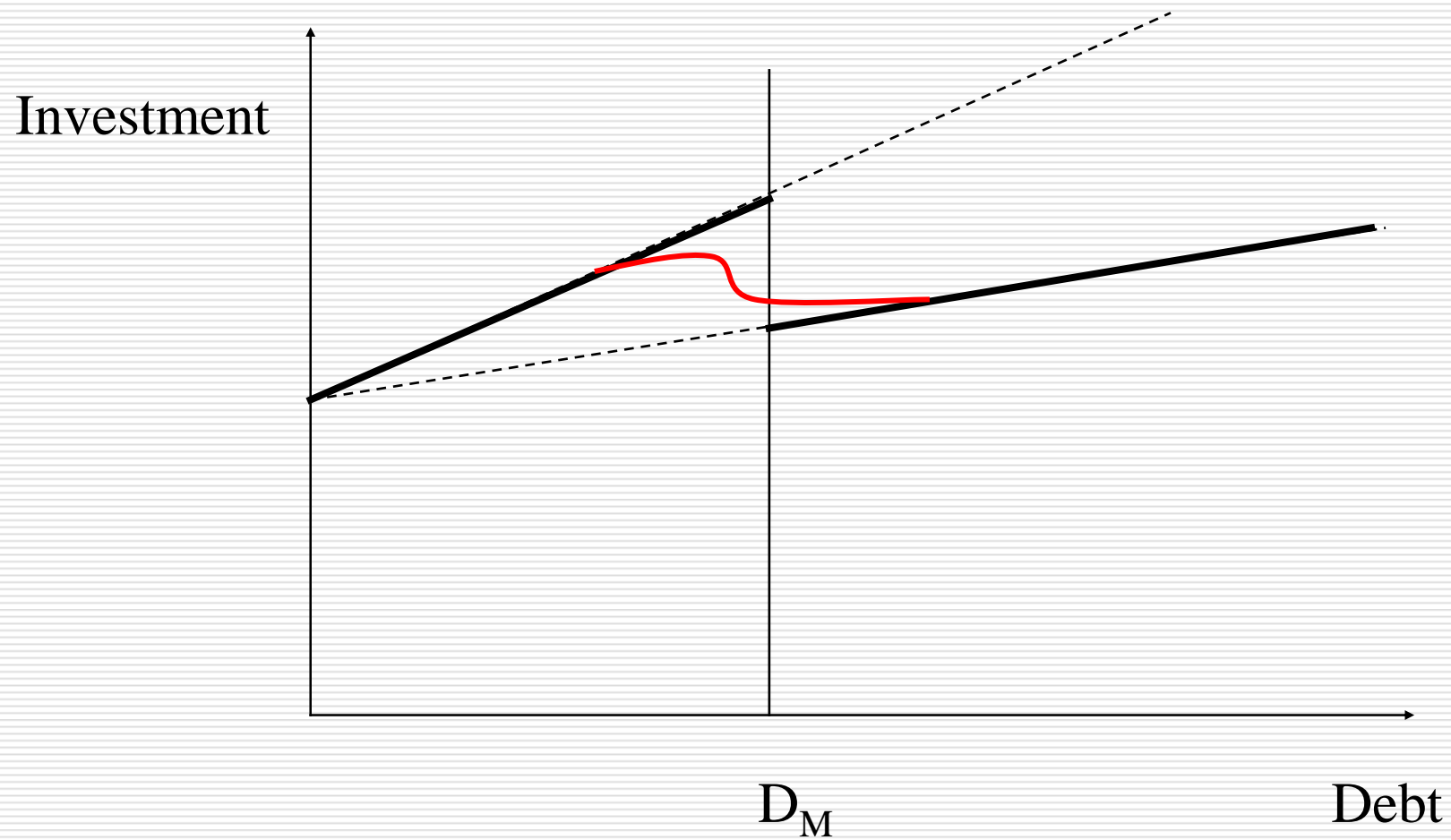
- Why repay the debt ? Gains vs Loses
  - What sanctions ? A share of wealth (Y) :  $\lambda$
  - Repayment if :
  - $D(1+r) < \lambda Y$
  - Credit rationing :
  - $D < \lambda Y / (1+r)$  or  $D_M = \lambda Y / (1+r)$
  - Problem : co-ordination of creditors, free rider
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# Debt overhang (Sachs, Krugman 89)

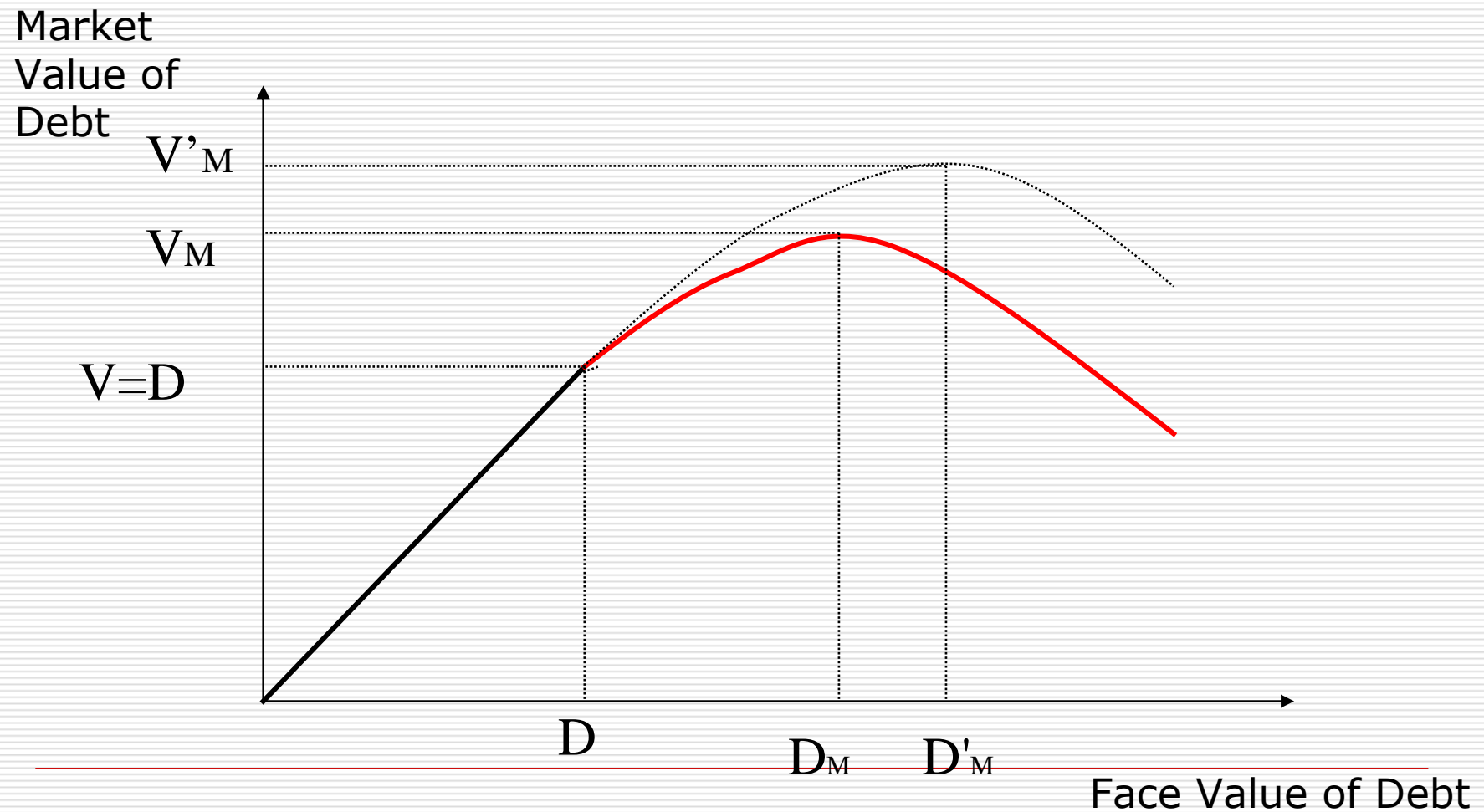
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- The behaviour of the debtor changes when the debt is more than  $D_M$  (not likely to be repaid)
    - Before  $D_M$  : debt service is fixed, the country gains from increasing income
    - After  $D_M$  : sanctions are imposed, they work as a tax on extra income, so reducing gains.
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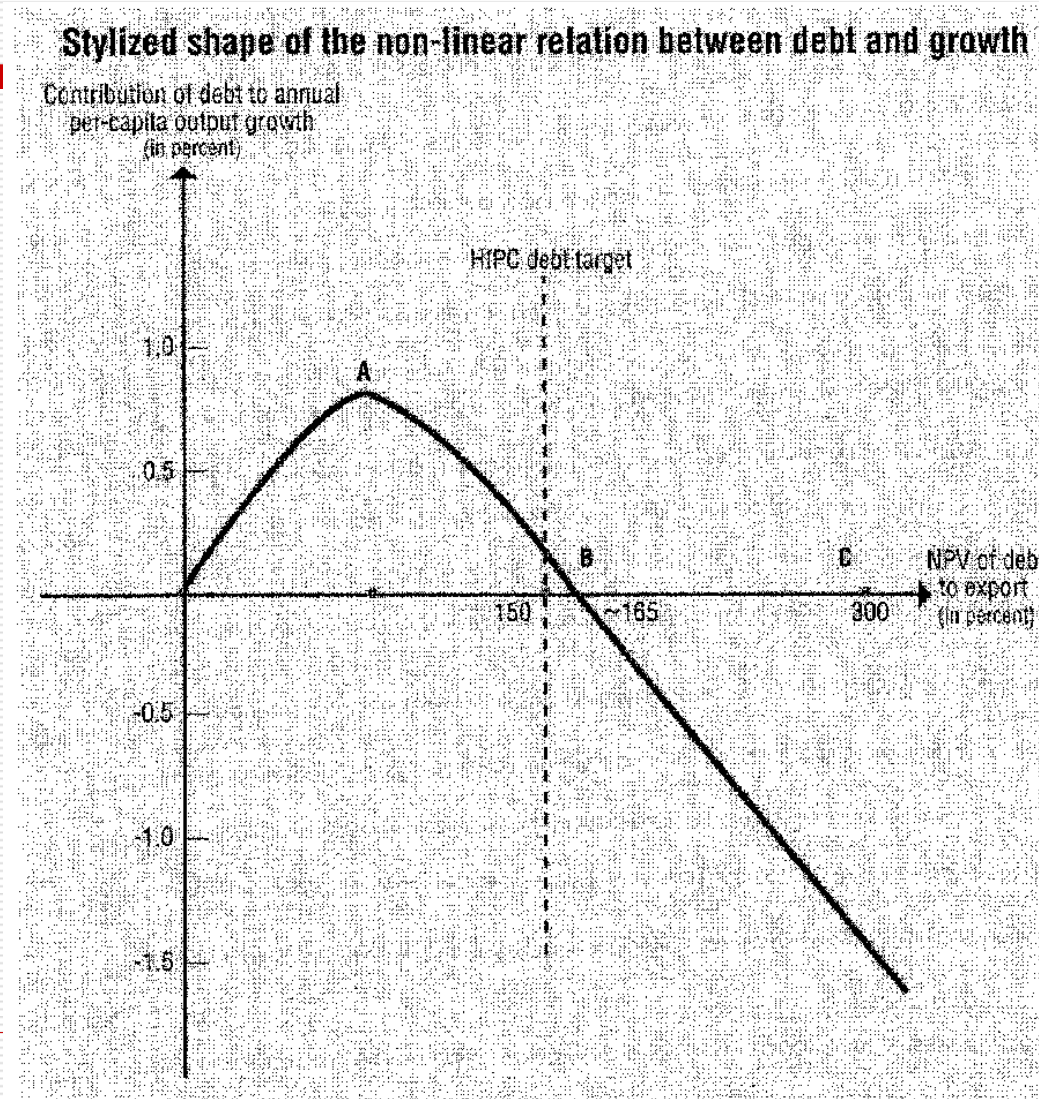
# Debt Overhang: Debt and Investment in a two periods, representative agent framework



# A rationale for debt relief ? Debt overhang and Debt Laffer curve



Estimation of the relation between debt and growth (Pattillo C., Poirson H., Ricci L. [2002]. "External Debt and Growth". *IMF Working Paper WP/02/69*. Avril).



# An elusive relation between debt and growth

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- Empirical research is inconclusive
    - Few specific research papers about HIPCs
  - And a problem with theory?
    - Investment, wealth and substitution
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  - **Impact of debt relief**
    - **HIPC and MDRI**
    - DSF
  - Debt is not what it used to be
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# From LICs to HIPC

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- ❑ Multilateral Debt couldn't be rescheduled (seniority)
  - ❑ HIPC : Highly Indebted Poor Countries (end 1996); Enhanced (end 1999)
  - ❑ Aim : debt sustainability
    - Threshold :  $\text{NPV of Debt} / \text{Exports of G\&S} < 150 \%$
    - Bilateral and Multilateral (and private) Debt Relief
  - ❑ Conditionality : Poverty Reduction Strategy Paper (PRSP)
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# HIPC Initiative

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- ❑ About 45 eligible countries
  - ❑ Some poor countries are not « enough » indebted (Haiti, Kenya..)
  - ❑ What to do with the (public) money freed by debt relief ? Special account, earmarked expenditure for basic health, primary education
  - ❑ Too specific (and maybe too much money), very low disbursements
  - ❑ Today: “poverty reducing expenditures”
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# From HIPC to MDRI

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- ❑ Multilateral Debt Relief Initiative (G8, Gleneagles, 2005)
  - ❑ Cancellation of IMF, WB, AfDB when Completion point of HIPC Initiative is reached (22 countries end August 07)
  - ❑ A break with HIPC rationale: if not a problem of debt overhang, what else?
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# Problems with LICs' debt

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- Is there a case for total debt cancellation (Jubilee 2000) ?
    - Problem of fairness
    - Problem of access to financial markets
    - Problem of further debt sustainability
  - No more loans to LICs ? Only grants ?
    - Problem of management
    - Development or assistance ?
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# Debt relief and Poverty reduction

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- An increase in “poverty reducing expenditure”?
  - In some cases, debt relief does not provide any additional resources
    - If the country did not formerly repay
    - If the other aid flows are shrinking when debt relief is granted
  - A problem of incentive:
    - Debt relief amounts to providing resources to (previously) bad managed countries.
    - An incentive to default in the future?
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# The impact is difficult to assess

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Does debt relief result in an increase of resources? In fresh money?

Not detrimental to tax collection (Cassimon & Van Campenhout AFD WP, 63, 2008)

A positive impact on “pro-poor” public expenditures (but sometimes weapons!)

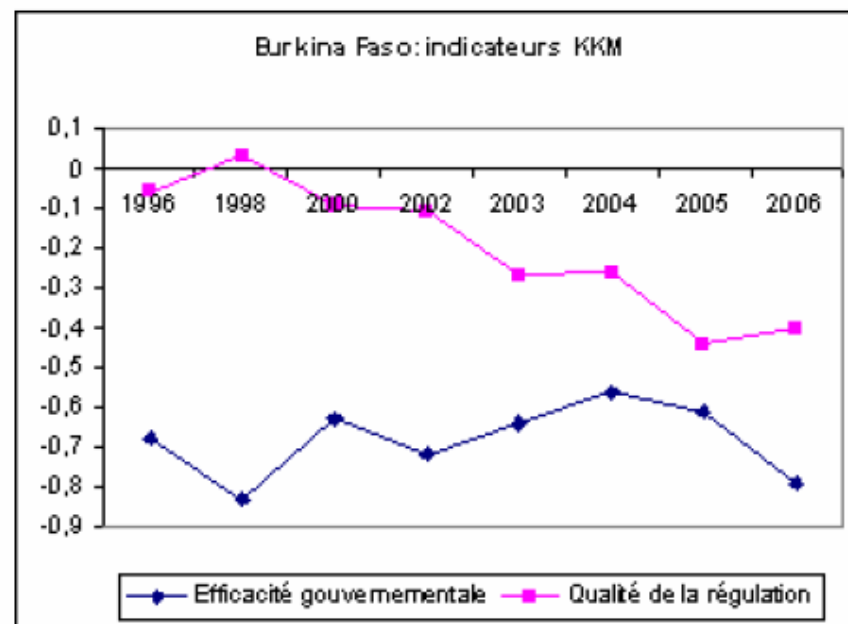
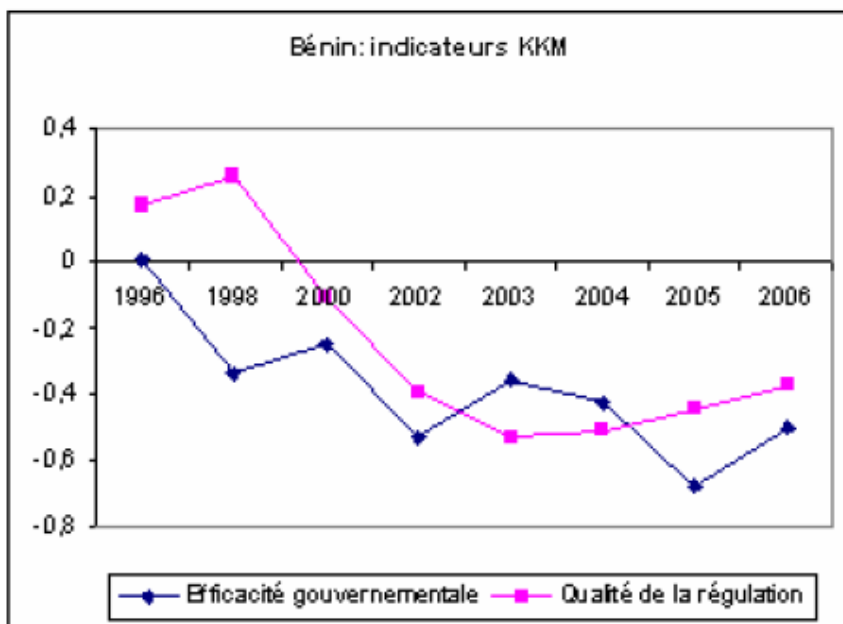
Mixed impact on investment, growth

Mixed impact on poverty

And a negative impact on governance?

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# Governance and institutions



Source: Idlemouden, 2009

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    - HIPC and MDRI
    - **DSF**
  - Debt is not what it used to be
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# Main Features of the DSF

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Debt cancellations but new possibilities:

- Access the international financial markets (Ghana 2007)?
  - Emerging Donors (BRICs)
  - How to avoid excess borrowing?
    - IMF-IDA debt sustainability framework (DSF)
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# IMF-IDA debt sustainability framework (DSF)

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- Forward-looking analysis
    - 20 year projection period reflects long maturity of LIC debt
    - Based on net present value (NPV) because concessionality is important in LIC financing
  - Baseline scenario (reforms), but also historical trends
  - Standardization (Two “alternative scenarios” and six “bounds tests”) and Comprehensive stress-testing
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# IMF-IDA debt sustainability framework (DSF) (cont'd)

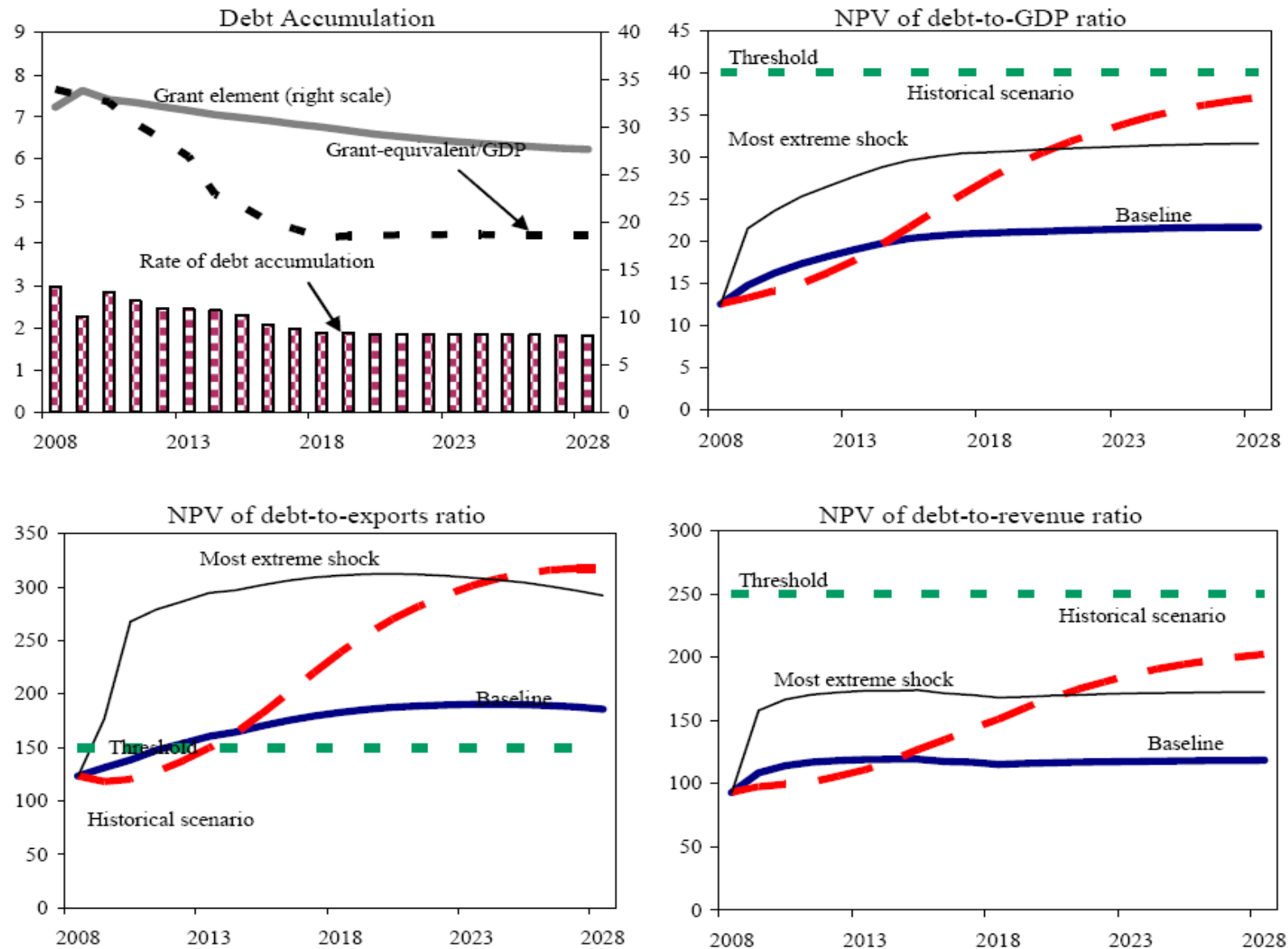
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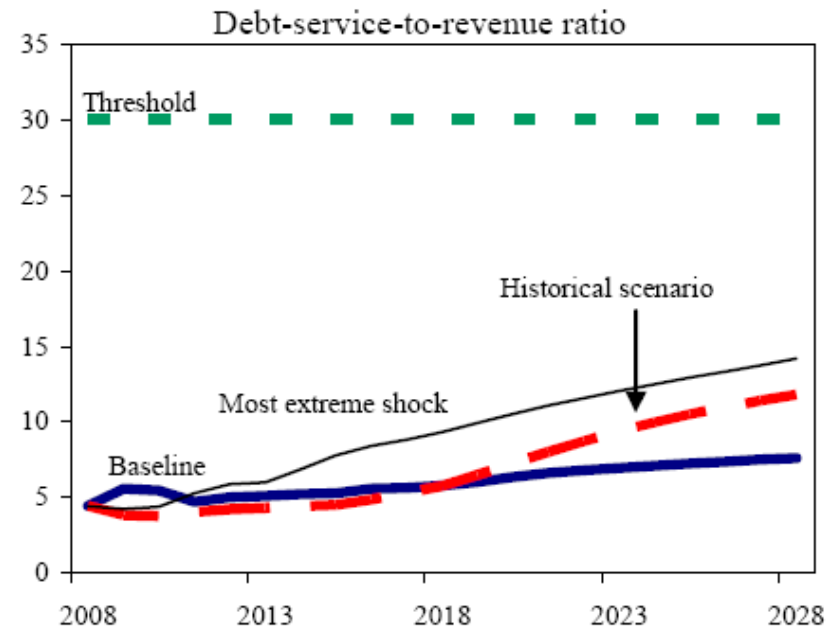
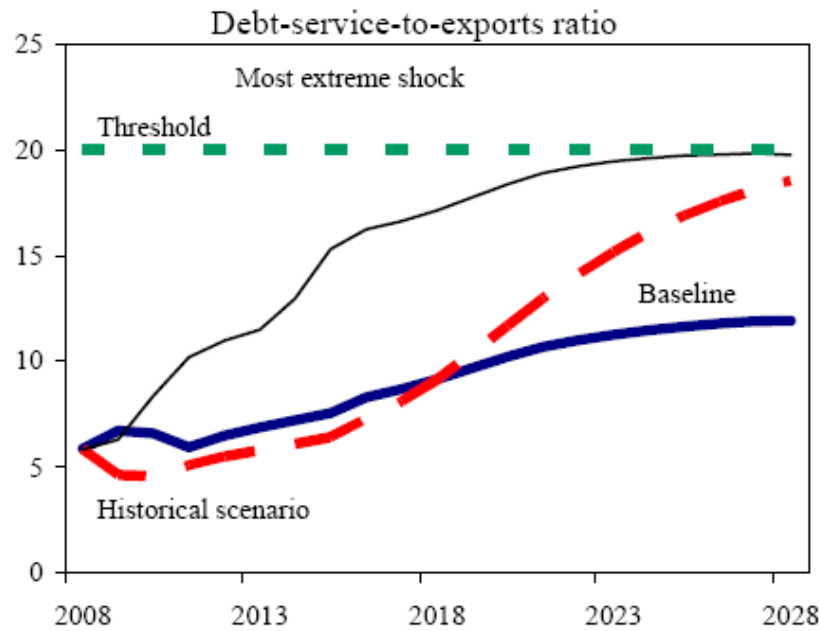
- Debt-burden thresholds defined according to quality of policies and institutions, as measured by the Bank's CPIA
  - The "historical average scenario" and "scenario of less favorable new financing" are designed as permanent modifications to baseline.
  - The stress tests analyze temporary shocks to four key macro-economic variables; a combination of these four tests; and a one-time 30% depreciation.
  - Different Thresholds:
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# Indicative Debt Burden Thresholds

	Strength of Policies and Institutions		
Ratio:	<b><math>CPIA \leq 3.25</math> (poor)</b>	<b><math>3.25 &lt; CPIA &lt; 3.75</math> (medium)</b>	<b><math>CPIA \geq 3.75</math> (strong)</b>
Debt Service to Exports	15	20	25
Debt Service to Revenue	25	30	35
NPV Debt to GDP	30	40	50
NPV Debt to Exports	100	150	200
NPV Debt to Revenue	200	250	300

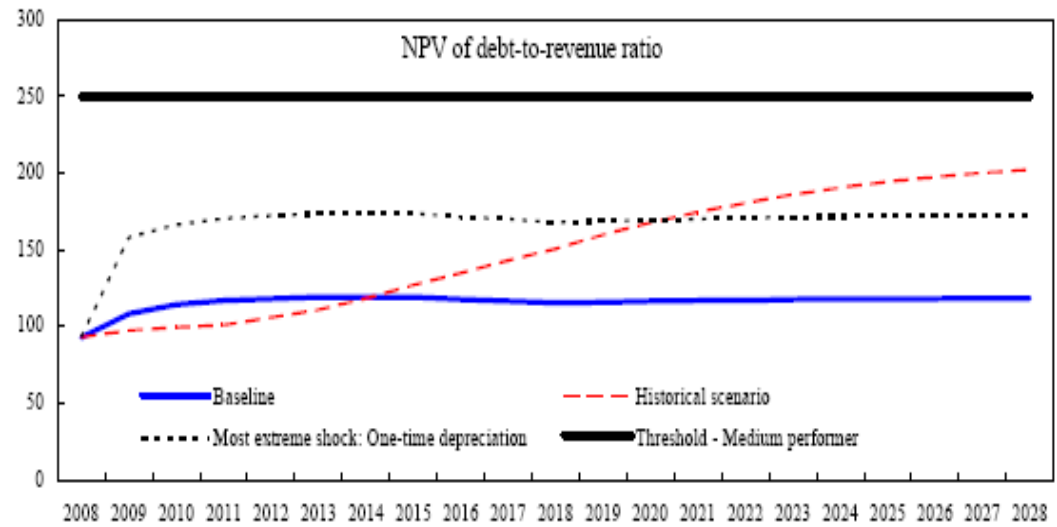
Appendix II—Figure 1. Burkina Faso: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios (in percent), 2008-28 1/





Source: Staff projections and simulations.  
1/ Thresholds for medium performer.

And External Public Debt :



# DSF: Critics

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- ❑ Domestic debt
- ❑ Difficult to use in negotiations: black box
- ❑ Does not take into account the policy response (may result in excessive adjustment) (Wyplosz 2005)
- ❑ Information, Baseline scenario debatable, volatility, heterogeneity among groups (Djoulfelkit & Raffinot 2008)

# Outline of the lecture

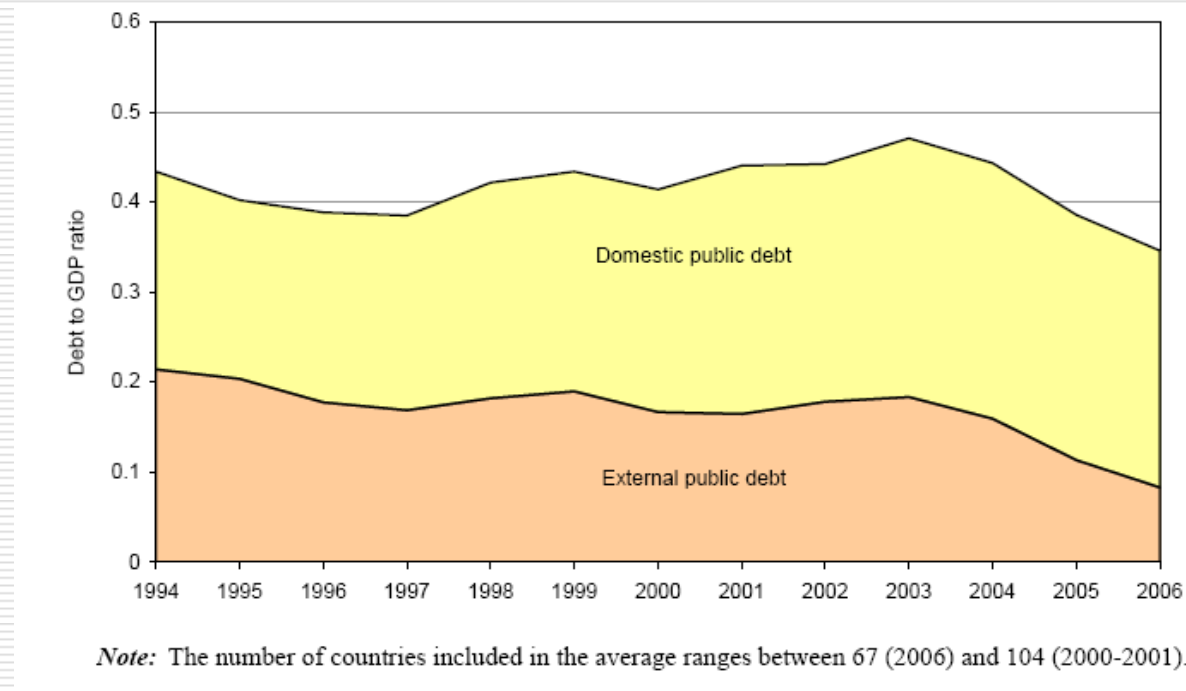
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# The end of the original sin?

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- External and domestic Debt of developing countries as a share of GDP :



Source : Panizza 2008, p. 8

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# Macro debt management: issues

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- External debt: Exchange rate risk, volatility
  - Domestic debt:
    - Macro impact on income (and repartition of income)
    - Crowding out of private investment?
    - Domestic Financial markets Deepening?
    - A risk of inflation (Seigniorage)?
    - Foreign currency is needed!
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# References

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- Djoufelkit H & Raffinot M. (2008), *Viabilité de la dette des pays à faible revenu dans une perspective de réendettement postallégements de dette*, Document de Travail n°75 (2008) téléchargeable sur [www.afd.fr](http://www.afd.fr)
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  - Reinhart C. et Rogoff K. (2008), *The forgotten History of Domestic Debt*, Working Paper 13946, NBER, Cambridge, Mass.
  - Wyplosz Ch. (2005) *Debt Sustainability Assessment: The IMF Approach and Alternatives*, HEI Working Paper No: 03/2007, Genève.
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