

#### Ninth UNCTAD Debt Management Conference

Geneva, 11 - 13 November 2013

# Debt Portfolio: Composition and Risk Management

by

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# Debt portfolio composition & Risk management

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#### **Outline**

- Perspective: low-income countries
- Same questions as high-income countries:
- 1) How to design a debt strategy?
- 2) How to implement it?
- 3) How to enforce its implementation?

but different challenges

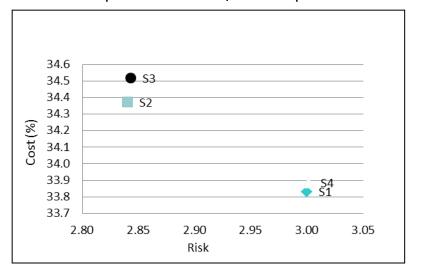
## 1) How to design a debt strategy?

LICs	"Intuition" and experience  Calculation of cost / risk indicators + scenario analysis (what if?)  Use of "off the shelf" deterministic models (WB/IMF's MTDS)	
HICs	In-house developed stochastic risk models, often including: - Estimation of contingent liabilities - Asset&Liability approach	

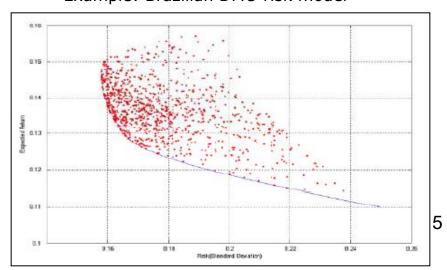
#### Deterministic vs. stochastic models

DETERMINISTIC	STOCHASTIC
Simple	Complex
"Ad hoc" simulations	Thousands of simulations (Montecarlo)
Can be developed in Excel	Need for advanced programming tool
Independent variables	Probabilities & correlations
Existing data	Need for historical series

Example: MTDS cost/risk output



Example: Brazilian DMO risk model



### Is an advanced risk model a real priority?

Risk models are very useful tool. However:

- They should support but not replace intuition;
- Should be robust, but not over-ambitious;
- DMOs should be aware of their limitations:
  - Results are good as long as the assumptions are sound
  - ✓ They cannot deal with very infrequent event
  - ✓ Not every variable can be easily quantified.

## 2) How to implement a debt strategy?

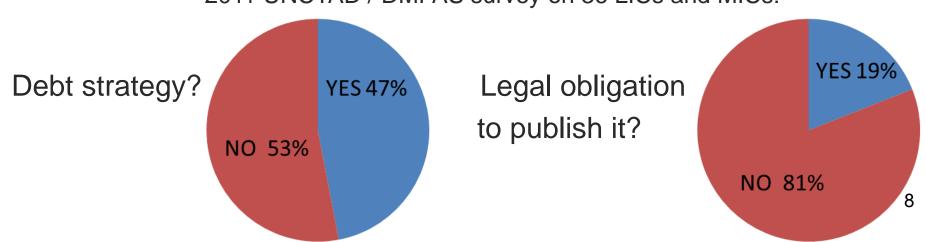
LICs	Limited borrowing alternatives: project loans; weak / not liquid / captive domestic markets; irregular access to international markets  Almost no liability management option: costly; no legal / operational frameworks in place
HICs	Vaste range of instruments (maturity/currency/markets)  Liability management operations (buyback, switches, derivatives, etc.)

This is a more significant gap

## 3) How to enforce its implementation?

LICs	Strategies often not officially adopted nor made public or brought to legislative bodies' scrutiny or approval
HICs	DMOs have clear mandate to design and implement the strategy

2011 UNCTAD / DMFAS survey on 36 LICs and MICs:



#### **Conclusions**

DMOs tend to focus on finding the best risk model.

However, for LICs <u>creating the conditions for the implementation</u> of debt strategies is equally important.

#### How?

- Reinforcing the institutional role of DMO and Middle Office;
- Strengthening their legal and regulatory system;
- Improving infrastructure set-up (debt management, auction, settlement & depository systems);
- Building sustainable expertise and credibility.

## **Conclusions (II)**

... and <u>formalizing the strategy</u> (even if imperfect and not based on sophisticated risk models), as this:

- Improves transparency and accountability;
- Reduces the risk of short-term fiscal adjustments;
- Allows coordination with fiscal / monetary / foreign exchange policies;
- Avoids conflicting "sub-strategies" for different components of the debt portfolio.

## Thanks for your attention.