The use of analytical tools to determine debt management strategies

National Treasury

Asset and Liability Management Division | 27 June 2013
• Core elements in designing debt management strategies
• South Africa’s analytical tools
• Public debt analytical tools
Core elements in designing debt management strategies
Key steps in formulating a debt management strategy

- Identify objectives for debt management and scope of the MTDS
- Identify cost and risk of the existing debt
- Identify potential funding sources
- Identify baseline projections and risks for key policy areas – fiscal, monetary and market
- Review key longer-term structural factors and determine implications for MTDS
- Identify the cost-risk trade-offs for alternative strategies, and rank their performance
- Review implications of preferred strategy with fiscal and monetary policy authorities, and for market conditions
- Submit recommendation and secure agreement on MTDS from decision makers

Source: Developing a MTDS – Guidance Note for Country Authorities (World Bank, IMF, 2009)
Debt strategy and annual borrowing plan

- Market Conditions & Demand Factors
- Regular & Stable Issuance Calendar
- Benchmark Bond Policy or New Issuance

Medium-term Debt Management Strategy

- Borrowing Mix
- Cost-Risk Consistency

Annual Borrowing Plan

- Integration of Cash & Debt Management
- Risk Mitigation

Govt. Budget

- Govt. Cash Flow Forecast

Macro-economic coordination

Buyback/Switches Other LM Opns
South Africa’s analytical tools
Debt and debt-service cost forecasting model

- Macroeconomic forecast
- Current portfolio
- Risk benchmark
- Model
  - Cash flows
  - Funding strategy
  - Gross borrowing requirement
    - Revenue
    - Extraordinary receipts/payments
    - Budget deficit
    - Redemptions
    - Debt service costs
    - Debt and debt service cost forecasting model
  - Output
    - Scenarios
    - Risk benchmarks
    - Volume of debt
- Funding instruments
  - Switches (Exchanges)/buy-backs

Management of refinancing risk

[Diagram showing refinancing risk over a period from 2013/2014 to 2025/2026, with categories like FRB, ILB, Zeros, Foreign, T-Bills, and Smoothning (R39bn) 6%.
Quality of cash management and forecasting is important

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<th>3-year annual forecast</th>
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<th>3-year monthly forecast</th>
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<td><strong>Year 1</strong></td>
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<td><strong>Months</strong></td>
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Current year rolling monthly forecast

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Rolling into year two

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<th>90-day daily forecasts (or longer if needed)</th>
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Current day firm forecasts (11:00 and 15:00)
Total net government debt

- Gross loan debt
- Net loan debt
- Total net debt as % of GDP (Right axis)

Per cent of GDP

R billion

2000/01 to 2015/16
Government debt-service costs to peak in 2013/14
Composition of the debt portfolio – 31 March 2013

- Domestic: 90.8%
- Foreign: 9.2%

- Fixed rate: 64.9%
- Non-fixed rate: 35.1%
Managing contingency liabilities

RiskCalc
- Moody’s KMV analytical tool is used to determine the probability of default by state-owned companies
- Models used indicators such as: profitability, leverage, debt coverage, liquidity
- The model is used to managed the national government’s guarantee exposure

CreditEdge
- The model is used to determine the National Treasury’s credit risk exposure for investing surplus cash
- Model includes business and financial risk indicators
Public Debt Analytical Tools
Available analytical tools

- Only few developing countries have a formal debt analytical tool
- Mostly build in-house
- MTDS “Toolkit” - IMF-World Bank
- DMFAS - UNCTAD
- Horizon - Commonwealth Secretariat
- Commercial software (CreditEdge/RiskCalc)
Analytical framework of Horizon: An overview

Source: Commonwealth Secretariat
Benefits of using Horizon by National Treasury

- Improving the formulation of our debt management strategy through an explicit, transparent and audit trails on cost-risk analysis
- Use the yield curve across the term structure for better forecasting of cash flows on future borrowings and valuation of debt
- Have the formulation and implementation of debt strategy in the same system and framework for continuity and consistency
- Better integration of cash and debt management
- Improve portfolio analysis through more risk indicators
- Improve analytical reporting on debt management
- Improved monitoring of annual borrowing plan
Thank You