OBJECTIVES OF ALM – THE MINIMISATION OF RISK & FISCAL/FINANCIAL VULNERABILITIES

WORKSHOP ON ASSET & LIABILITY MANAGEMENT – MIDRAND, SOUTH AFRICA

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Overview of Sovereign Asset & Liability Management

- The overarching objectives of implementing SALM framework
  - In a sovereign set up, the SALM framework should always be consistent with the overall macroeconomic policy objectives and/or framework of the country.
  - ALM studies in Pension Funds, LT Insurance Companies, Asset Management Companies, Corporates and to some extent Banks indicate that:
    - The joint management of assets and liabilities regarding the investment of assets and (risk) management of liabilities at a single or multiple future points in time usually has a long-term focus.
    - The ALM approach - key role in decision making and risk analysis
    - However, short-term risks, liquidity management and whether the institution’s assets cover its short-term obligations remain important tactical considerations to assess and quantify.
  - The other importance of the SALM framework is that it should preserve the positive sovereign financial net worth.
  - Definitions of relevant assets and liabilities as well as methodologies to obtain optimal debt and asset outcomes are country specific.
Government Assets & Liabilities

**ASSETS**

- **In a narrow sense**
  - Financial assets:
    - Cash holdings (e.g. liquidity buffer)
    - Government financial assets (pension fund assets)
  - State Owned Companies (SOCs)
  - Foreign currency reserves on central bank balance sheet

- **In a broader sense**
  - Physical assets (infrastructure, buildings)
  - Future tax receipts

**LIABILITIES**

- **In a narrow sense**
  - Outstanding central-government debt:
    - Domestic debt
    - Foreign currency debt
  - Explicit government guarantees

- **In a broader sense**
  - General government liabilities:
  - Implicit government guarantees
  - Government promises
    - Pension, medical care, education, unemployment benefits

Broad ALM: including non-financial assets & liabilities (Economic-Risk Balance Sheet)

**ASSETS**
- *Present Value of Incomes from:*
  - Taxes
  - Fees
  - Seigniorage
- *Balances of*
  - Cash
  - Currency Reserves
  - Investments (pension and wealth funds)
  - State Owned Companies
  - Infrastructure
  - Real Estate
  - Other assets

**LIABILITIES**
- *Present Value of Nondiscretionary Expenses on:*
  - Social & econ development
  - Econ development
  - Government administration
- *Balances of*
  - Monetary base
  - Government debt
    - In domestic currency
    - In foreign currency
  - Pension Liabilities
- *Contingent claims (explicit & implicit)*
  - Guarantees – banks; nonbanks; retirement income; social welfare
- *Net (financial) worth*

Source: Merton (2007)
Rationale for joint management of assets & liabilities

- **Rationale for narrow ALM**
  - Managing net debt instead of separate management of assets and liabilities emphasizes the importance of cash buffer (financial asset) in reducing the sovereign liability exposure.

- **Rationale for broader ALM**
  - Theoretical rationale for broader ALM
    - Fiscal Balance = Primary Balance + Interest
      - Variability of the overall budget depends on correlation between the primary balance and debt service costs
    - Merton (2007) provides a comprehensive sovereign balance sheet
      - It is based on economic rather than accounting principles
      - It takes into account the intertemporal objectives of the sovereign including future incomes and expenditure.
Country examples

- **Narrow ALM:**
  - Austria
  - Belgium
  - Canada
  - Denmark
  - France
  - Hungary
  - South Africa (transition to broader ALM)

- **Broad ALM:**
  - New Zealand

Risk minimisation: implications for debt instruments, debt portfolio structure & fiscal policy

- Tax smoothing objective

  - In Ricardian Equivalence conditions, if taxes are distortionary, tax smoothing over time becomes an important determinant of the **Debt Level**.

  - Government should structure its debt portfolio in such a way that non-diversifiable risks are hedged in order to reduce taxation costs.

  - In the tax smoothing argument – to minimise the need to raise taxes or curtail expenditure when faced with unexpected shock causing a permanent fall in revenues or a rise in fiscal obligations – supports the SALM framework.
Risk minimisation: implications for debt instruments, debt portfolio structure & fiscal policy

- **Smoothing of fiscal balances objective**

  - Optimal government debt structure depends on the correlations between Revenue, Inflation and Interest Rates.

  - If Revenue and Inflation are positively correlated, the government’s optimal debt strategy will be to issue inflation linked bonds or floating-rate bonds.

  - The primary objective in most countries is to minimise the cost of government financing and debt service, while incurring a prudent level of risk in doing so (IMF/WB, 2001).

  - Reducing variability of debt service will in a way also reduce budget deficit variability.
Managing the risk of foreign currency mismatches

- Foreign currency exposure has dimensions of liquidity and balance sheet risks.
- Inclusive in the strategic benchmark is the share of foreign currency debt.
- Optimum currency composition of debt is based on the cost minimisation objective subject to risk.
- In reducing sovereign balance sheet vulnerabilities government maintain a low level of short-term and foreign debt.
- In developed countries, international reserves could be directly linked to external debt depending on the coordination arrangement.
- It may be reasonable to match the currency and maturity structure of reserves with that of the public debt – simple natural hedging strategy!
Reducing financial vulnerabilities

- Acknowledging macro-financial risks and risk transmission across sectors of the sovereign balance sheet (the complicated route!)
Mean-variance Approach (Markowitz, 1952)
• Strategic debt/asset allocation given some degree of risk tolerance.

Value-at-Risk
• Determine maximum loss (asset position) or increase value (liability position) at some confidence level.

Cost-at-Risk
• Determine maximum volatility of debt service costs at some confidence level based on the size of tolerable or expected debt costs.

Contingent Claims Analysis
• Compute risk-adjusted mark-to-market balance sheets given current and forward looking financial market prices.
Thank You