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

Source: World Bank (2012)

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

Source: Merton (2007)

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**

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

Source: World Bank (2012)

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.

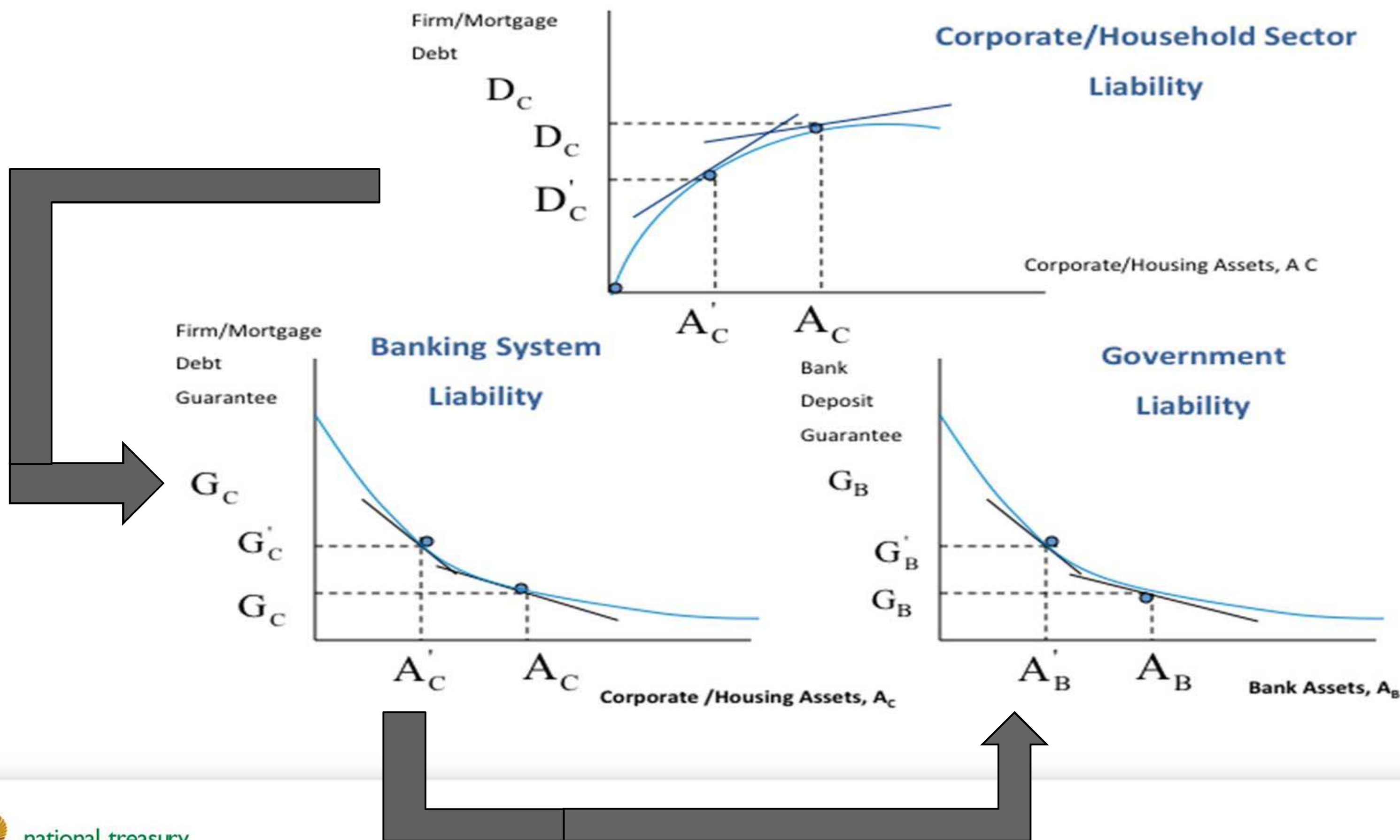
Reducing of financial vulnerabilities

- **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!)**



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SALM Methodologies in conclusion

- **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