

An Integrating Risk Balance Sheet Approach to Navigating Market Shocks



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Government Risk Balance Sheet Applying Integrated Asset/Liability Management

Determining the investment goal and strategic asset allocation for reserve, sovereign wealth fund, and pension funds

Assets

Present Value of Incomes from:	\$ Bn
Taxes	1130.7
Fees	84.8
Seignorage	TBD
<i>Balances of:</i>	
Balances in Funds	872.0
Currency Reserves Fund \$204.0	
Wealth/Stabilization Fund \$508.0	
Pension Fund \$160.0	
Cash Government-Owned Enterprises and Royalty Assets	TBD
Infrastructure	TBD
Cash	112
Real Estate	TBD
Other Assets	6.0
Total Assets	2225.7

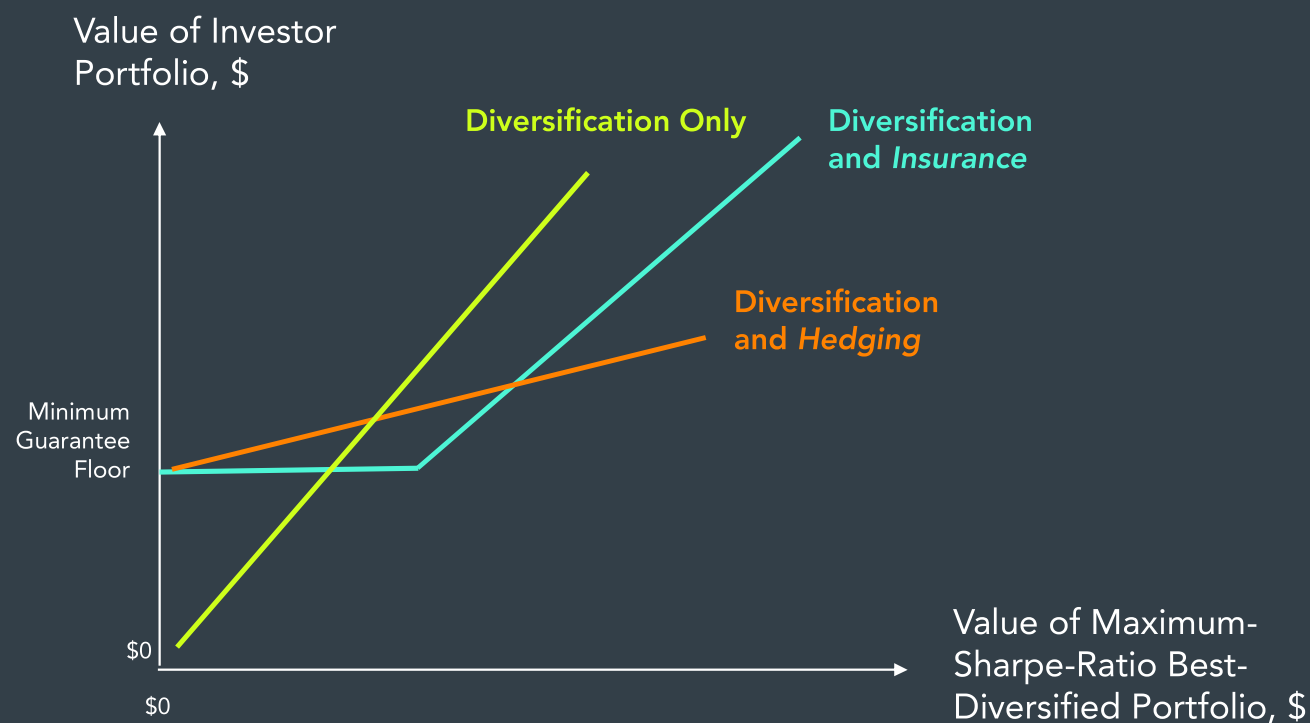
Liabilities and General Balance

Present Value of Non-Discretionary Commitments on:	\$ Bn
Social Development	653.0
Security and External Relations	600.6
Economic Development	193.4
Government Administration	70.7
<i>Balances of:</i>	
Monetary Base	TBD
Government Debt Outstanding	
Foreign Currency \$TBD	
Local Currency \$TBD	
Pension Liabilities	TBD
Contingent Claims (Explicit and Implicit Guarantees)	TBD
Uncommitted General Balance	708.1
Total Liabilities and General Balance	2225.7

Note: Economic Balance Sheet integrates central bank
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Only Three Ways to Manage Risk Diversification, Hedging and Insurance

Combinations of all three can be used to create the optimal portfolio payoff structure for a specified goal



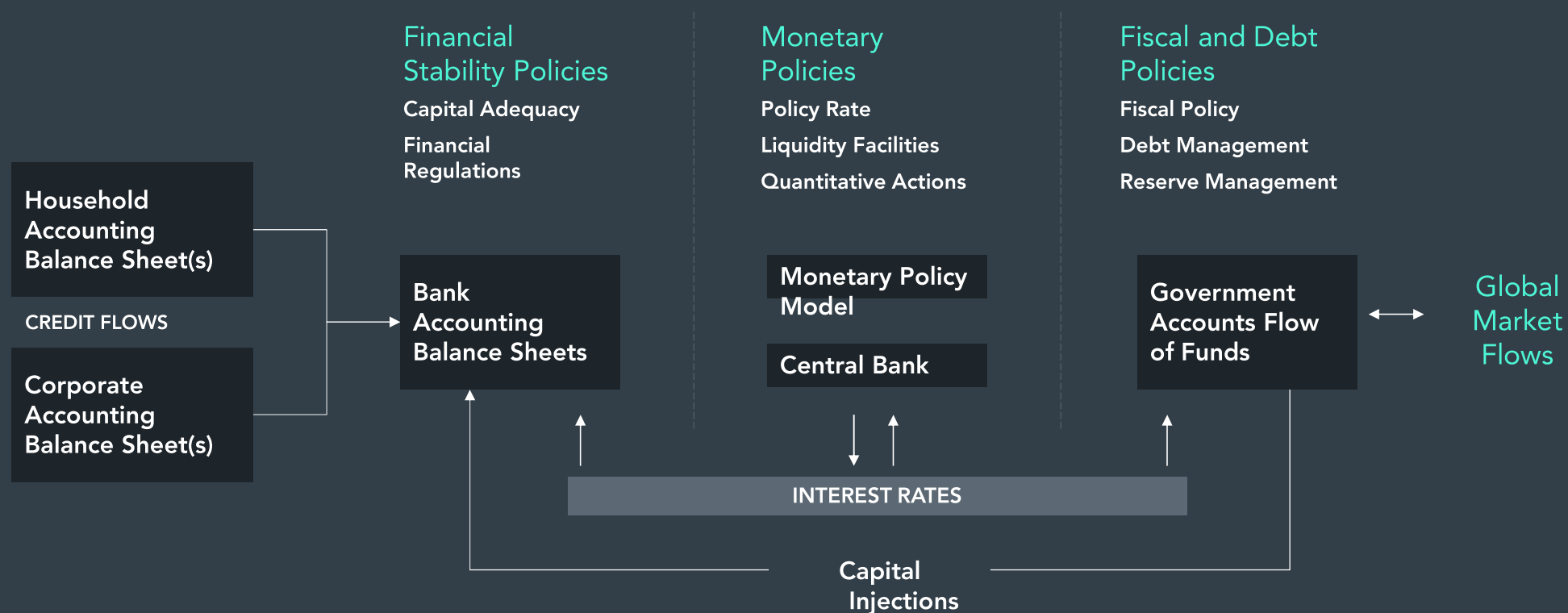
Diversification and hedging are "free"

Insurance must pay a premium fee

Traditional Flow-and-Accounting Framework for Monetary , Fiscal & Stabilization Policies

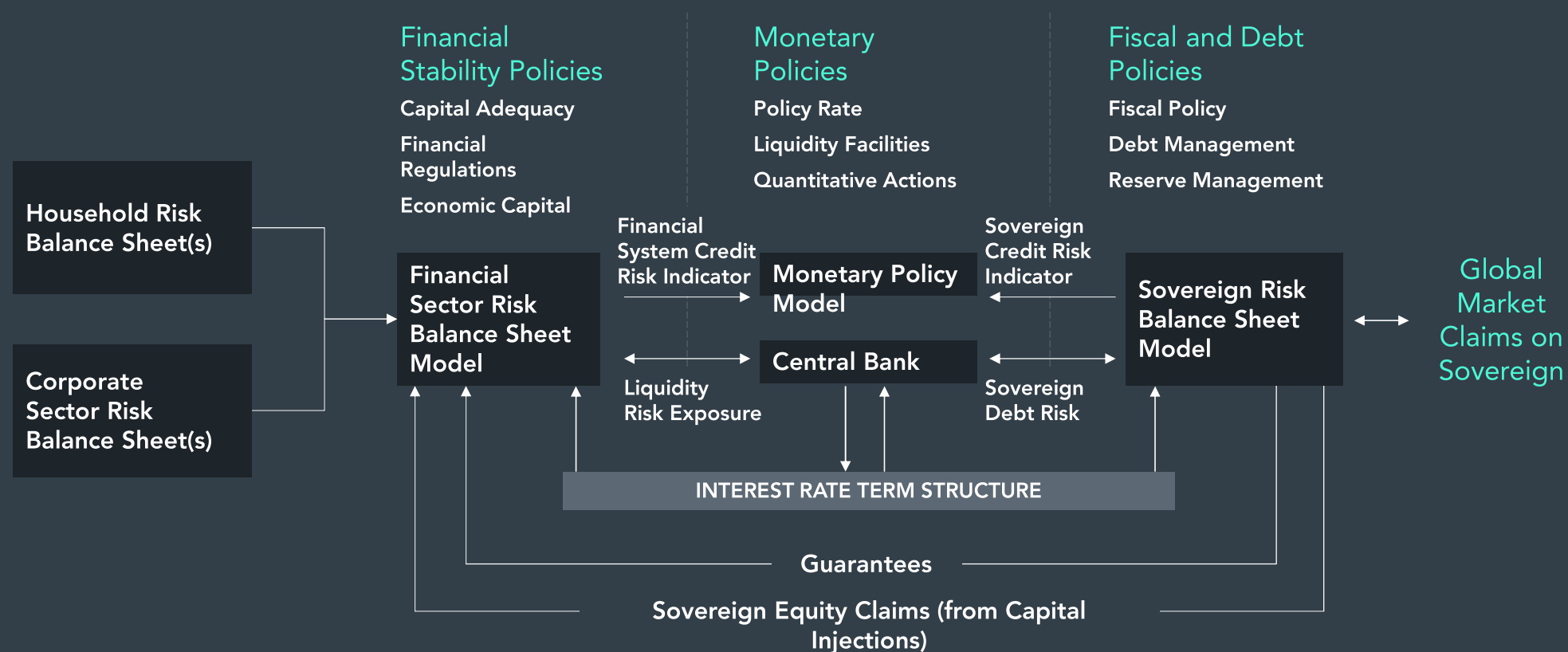
No Risk-Adjusted Balance Sheets (Asset Volatility = 0)

No Credit Risk or Guarantees; No Risk Exposures or Flows

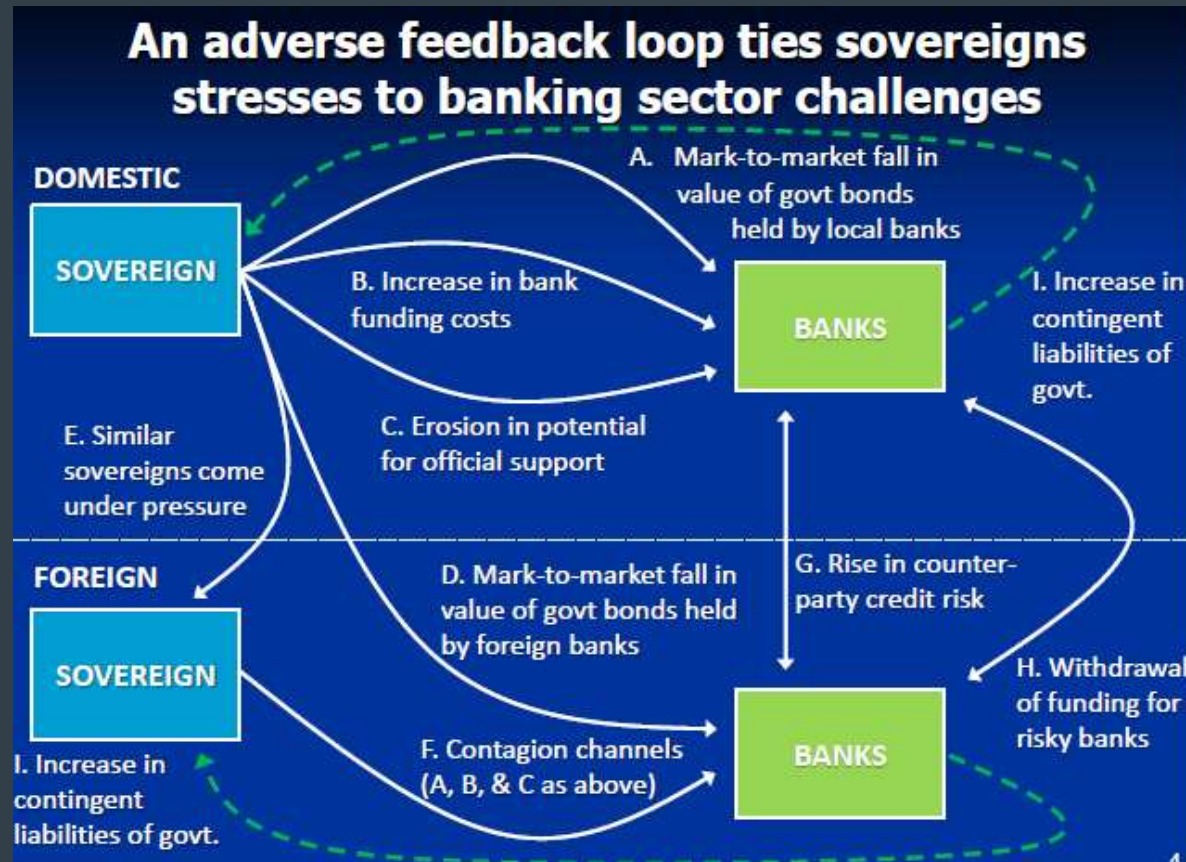


Unified Macrofinance Policy Framework with Risk Balance Sheets

Targets: Inflation, GDP, Interest Rates, Financial System Credit Risk, Sovereign Credit Risk



Feedback Loops of Risk Propagation and Amplification Across Geopolitical Borders from Explicit and Implicit Guarantees



Source: IMF GFSR 2010, October. Dale Gray.