

Fiscal Risk Analysis & Management

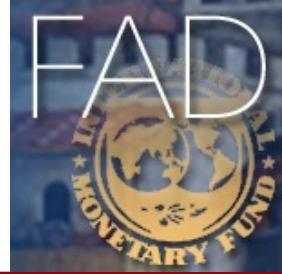
Brian Olden

Fiscal Affairs Department
IMF-JICA Conference

FISCAL RISKS, FISCAL SPACE, AND THE SUSTAINABLE DEVELOPMENT GOALS

February 2017





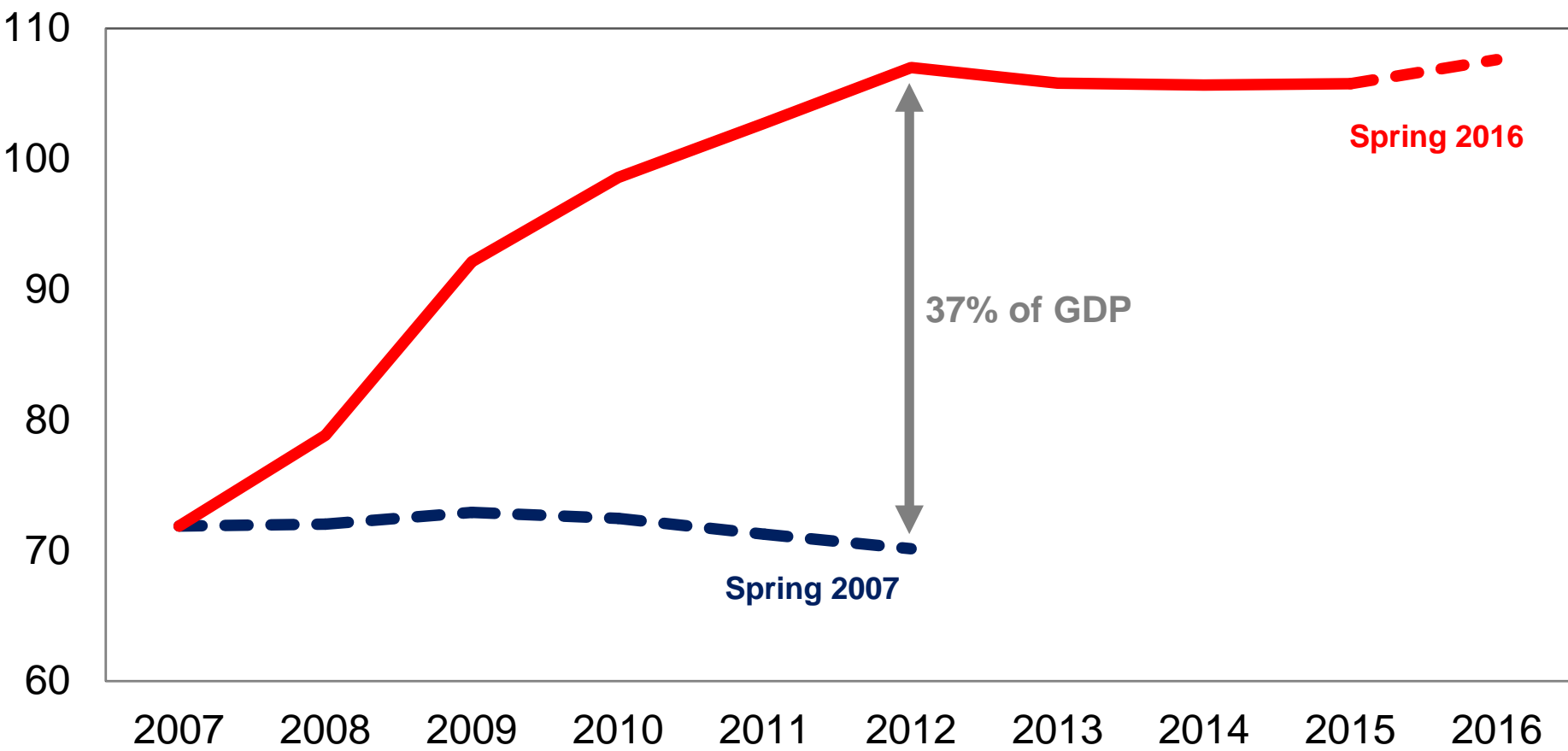
Outline of Presentation

- I. Why Fiscal Risks Matter**
- II. Characteristics of Fiscal Risk**
- III. Fiscal Risks in LICs**
- IV. Understanding & Management of Fiscal Risks**
- V. Strengthening Fiscal Risk Analysis & Mitigation**
- VI. Conclusions**

I. Why Fiscal Risks Matter

a. Public Debt Forecasts for Advanced Economies

Advanced Economies: Public Debt
(2007-2016, Percent of GDP)



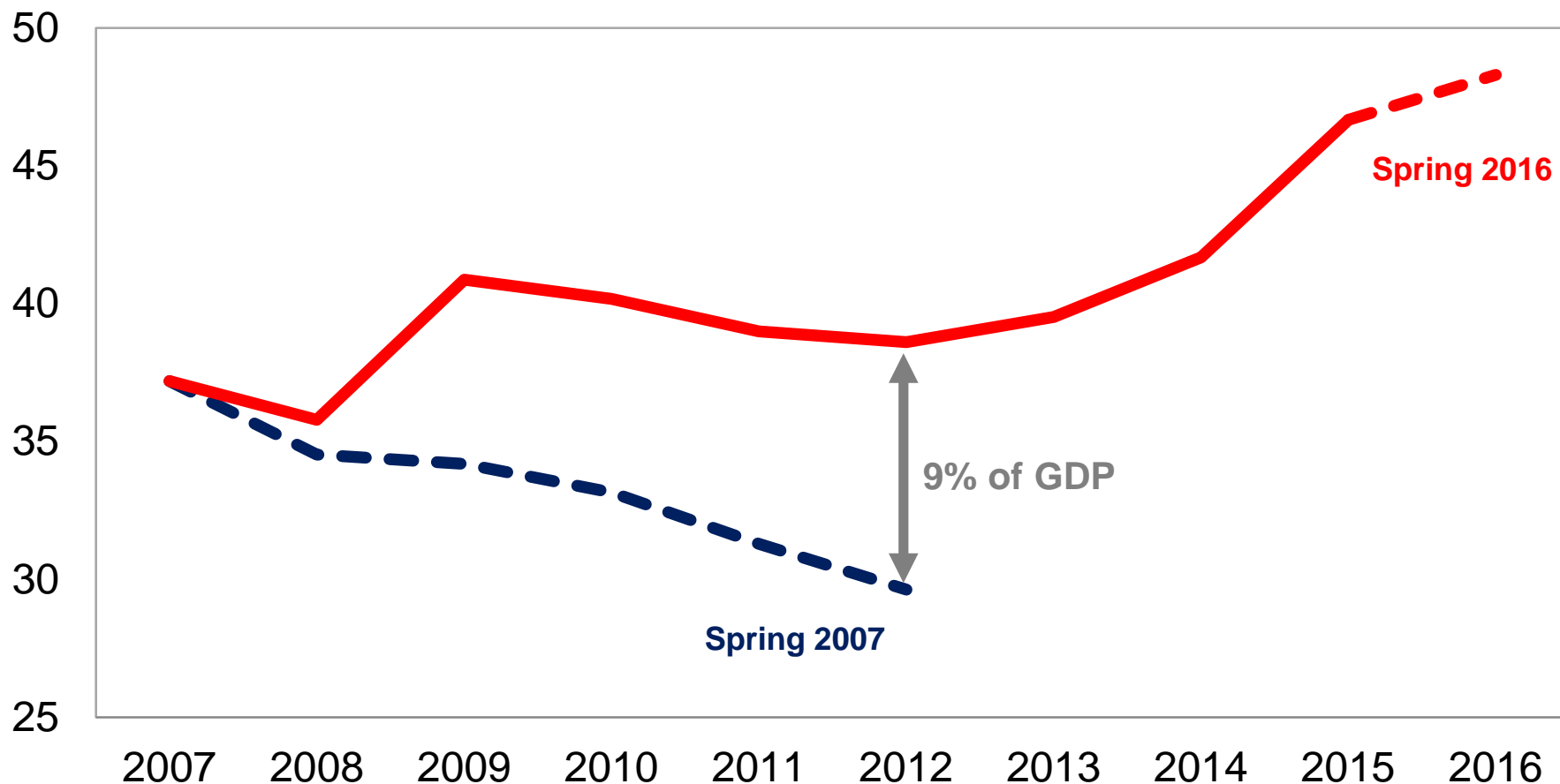
Source: *Fiscal Monitor* Database and staff estimates.

I. Why Fiscal Risks Matter

b. Public Debt Forecasts for Emerging Economies

Emerging Economies, Excluding China: Public Debt

(2007-2016, Percent of GDP)



I. Why Fiscal Risks Matter

c. How Fiscal Risks Impact on Fiscal Outcomes

Unexpected Increase in General Government Debt
(percent of GDP, 2007-2010)

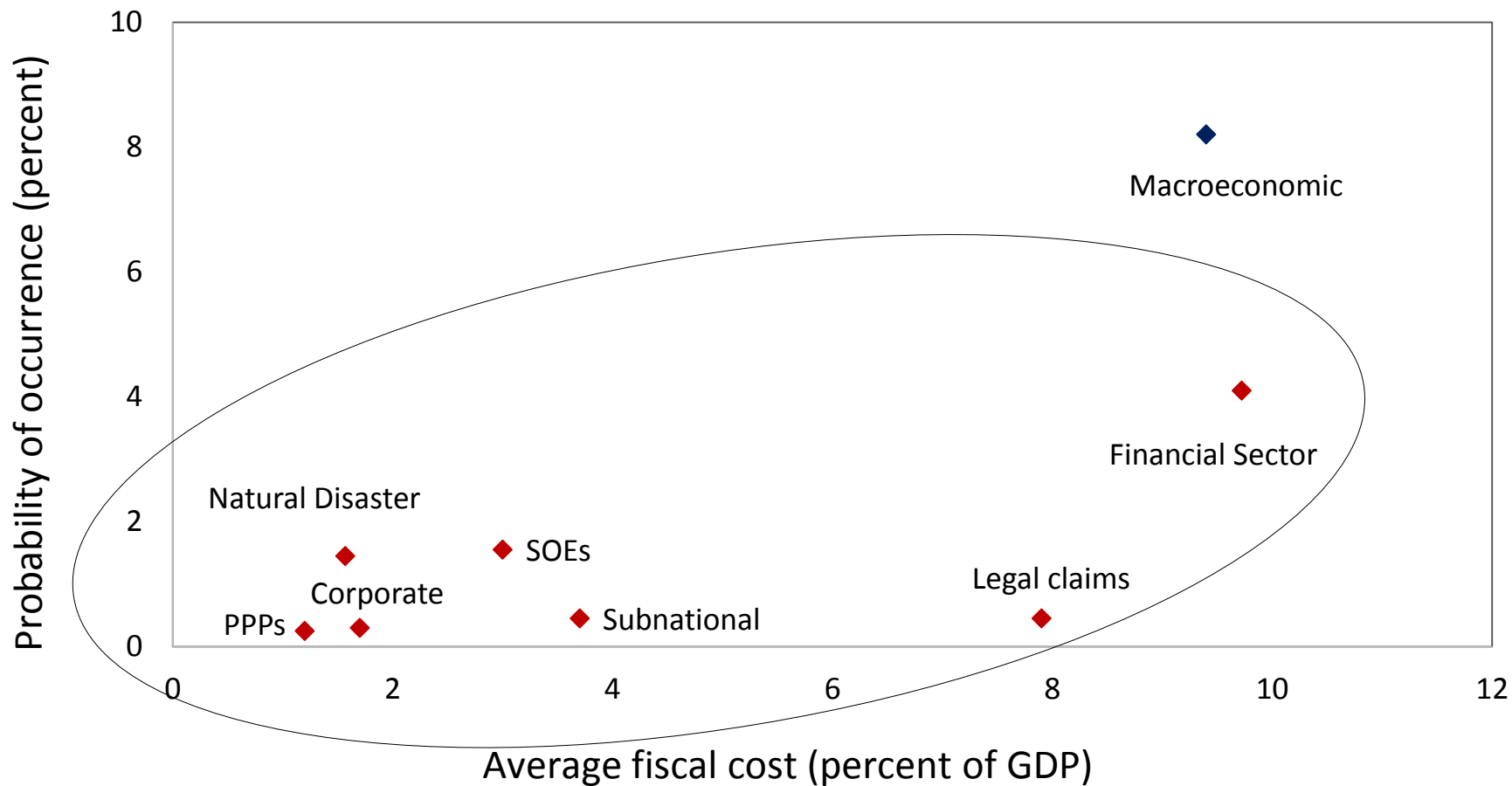
	FRA	DEU	NLD	ESP	PRT	GBR	USA	GRC	IRL	ISL	AVE*	Issues Revealed by the Crisis
Underlying fiscal position	1.7	3.2	-2.4	1.8	11.3	3.7	8.1	16.3	1.3	10.9	6.0	
Revisions to 2007 deficit & debt	1.7	1.8	-0.9	-0.1	0.1	1.5	7.1	2.5	1.6	4.0	4.7	Unreported Deficits
Changes to government boundary	-0.7	1.4	-0.2	0.6	9.4	1.9	0.9	11.2	-0.1	2.5	1.1	SoEs & PPPs
Cash-accrual adjustments	0.7	0.0	-1.3	1.3	1.7	0.3	0.0	2.6	-0.2	4.5	0.2	Arrears
Exogenous shocks	8.4	12.8	14.2	15.4	8.1	17.0	6.3	40.0	60.2	39.5	9.8	
Macroeconomic shocks	8.3	4.7	5.2	13.0	4.4	8.9	3.8	38.4	35.7	-3.3	6.0	Macroeconomic Risks
Financial sector interventions	0.0	8.1	9.0	2.5	3.6	8.1	2.5	1.6	24.5	42.8	3.8	Contingent Liabilities
Policy changes	2.3	3.8	1.9	4.9	4.7	1.1	6.4	-8.0	-9.9	-4.3	4.7	Stimulus / Consolidation
Other factors	2.1	-0.3	6.5	1.9	3.7	6.2	8.3	-6.7	7.5	21.6	5.9	
Total Unforecast Increase in Debt	14.4	19.5	20.2	24.0	27.8	28.0	29.1	41.7	59.1	67.7	26.4	

* GDP-weighted average

II. Characteristics of Fiscal Risks

a. Fiscal risks are large (and surprisingly frequent)

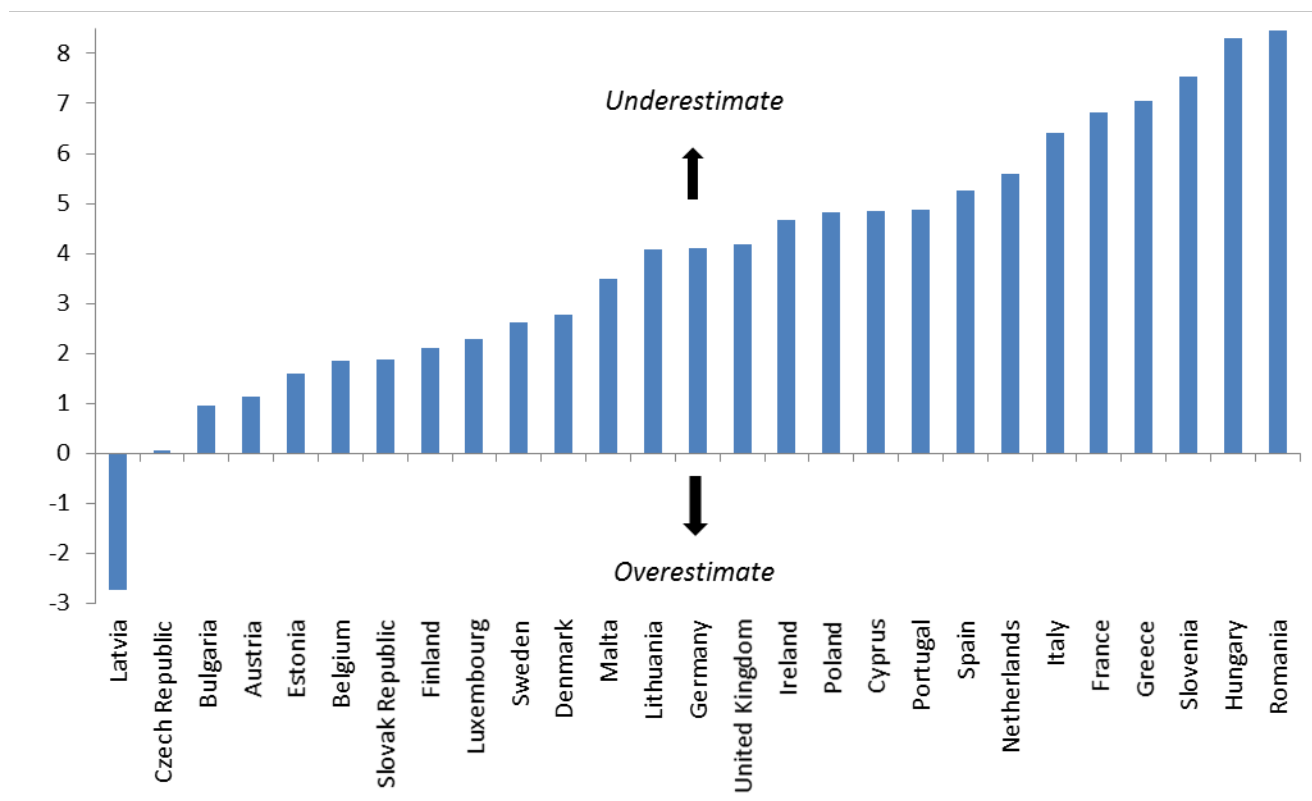
Size and likelihood of fiscal shocks by type



II. Characteristics of Fiscal Risks

b. Fiscal risks are biased toward the downside

Forecast Error for General Government Debt in Y+3
(2000-13 average as % of GDP, actual-forecast)

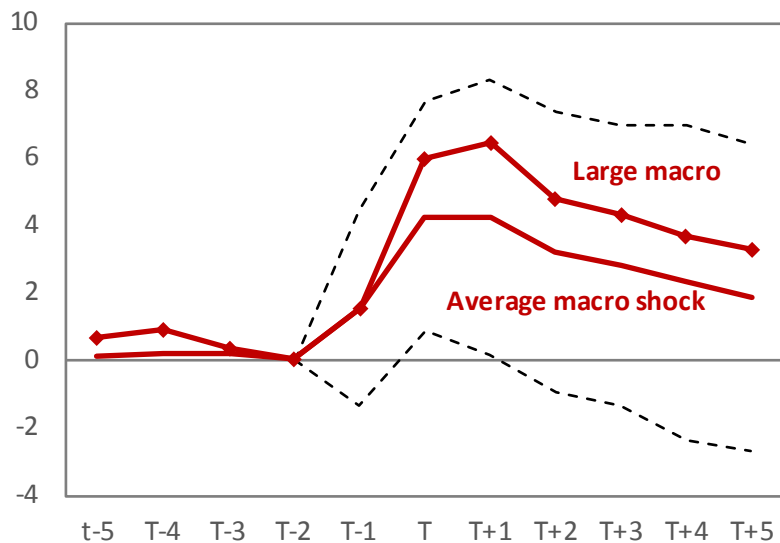


II. Characteristics of Fiscal Risks

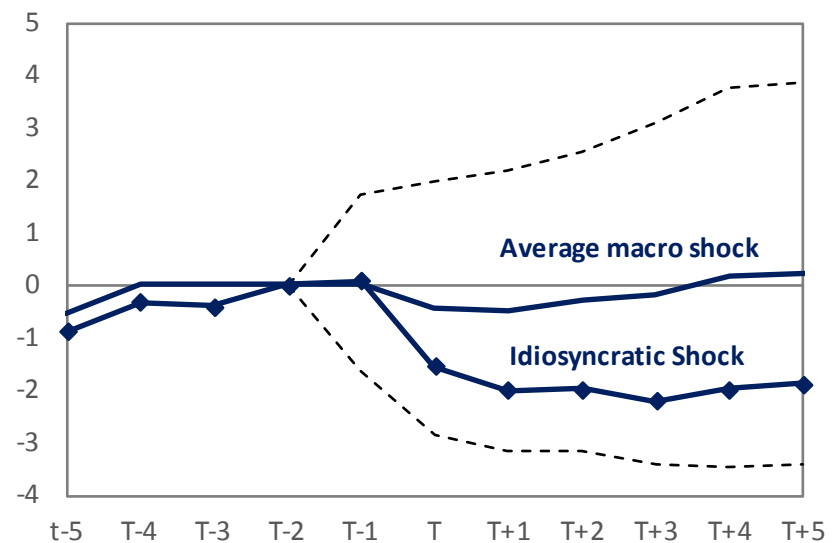
c. Fiscal risks are non-linear

Typical Fiscal Reaction to Macro shocks

Expenditure Variation
(percent of GDP)



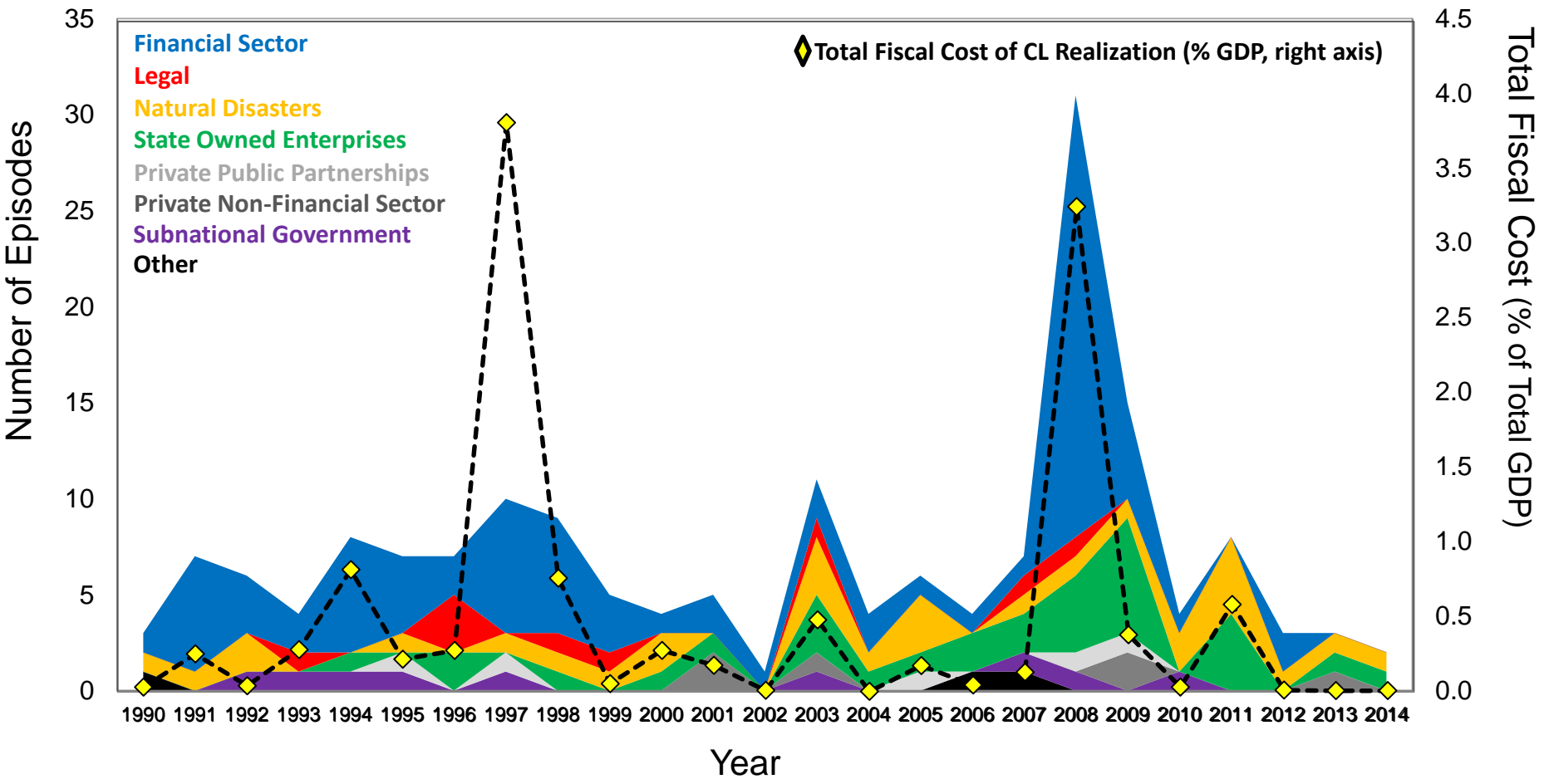
Revenue Variation
(percent of GDP)



II. Characteristics of Fiscal Risks

d. Fiscal risks are highly correlated

Contingent Liability Realizations

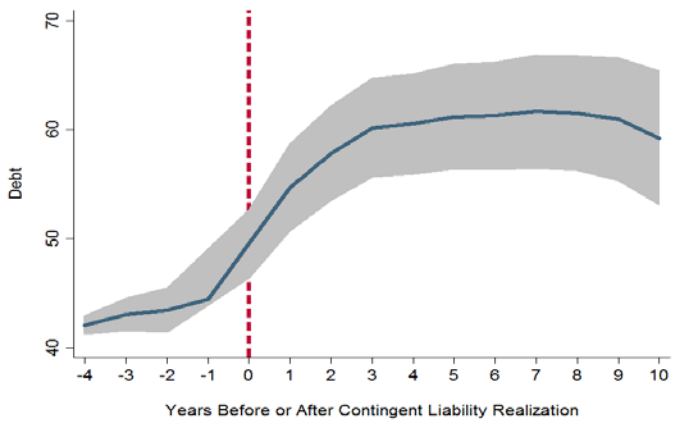


Source: Bova et al. (2016)

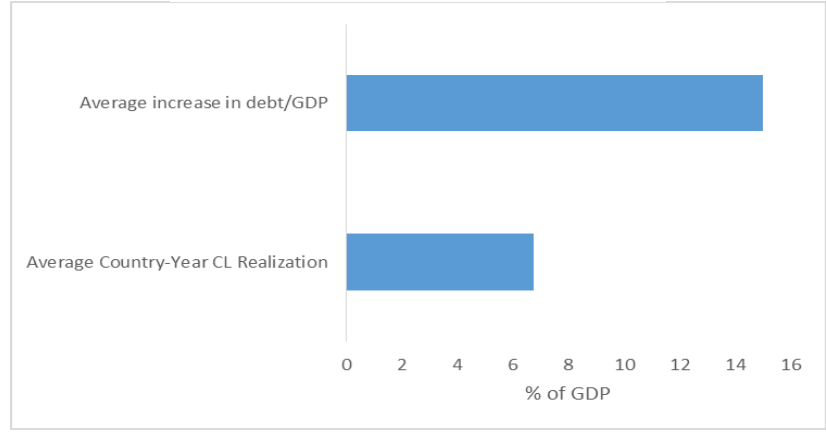
II. Characteristics of Fiscal Risks

e. With broader implications

Debt



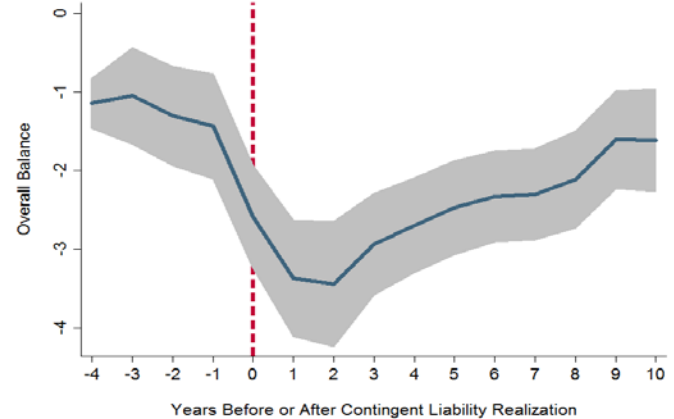
Increase in Debt



GDP

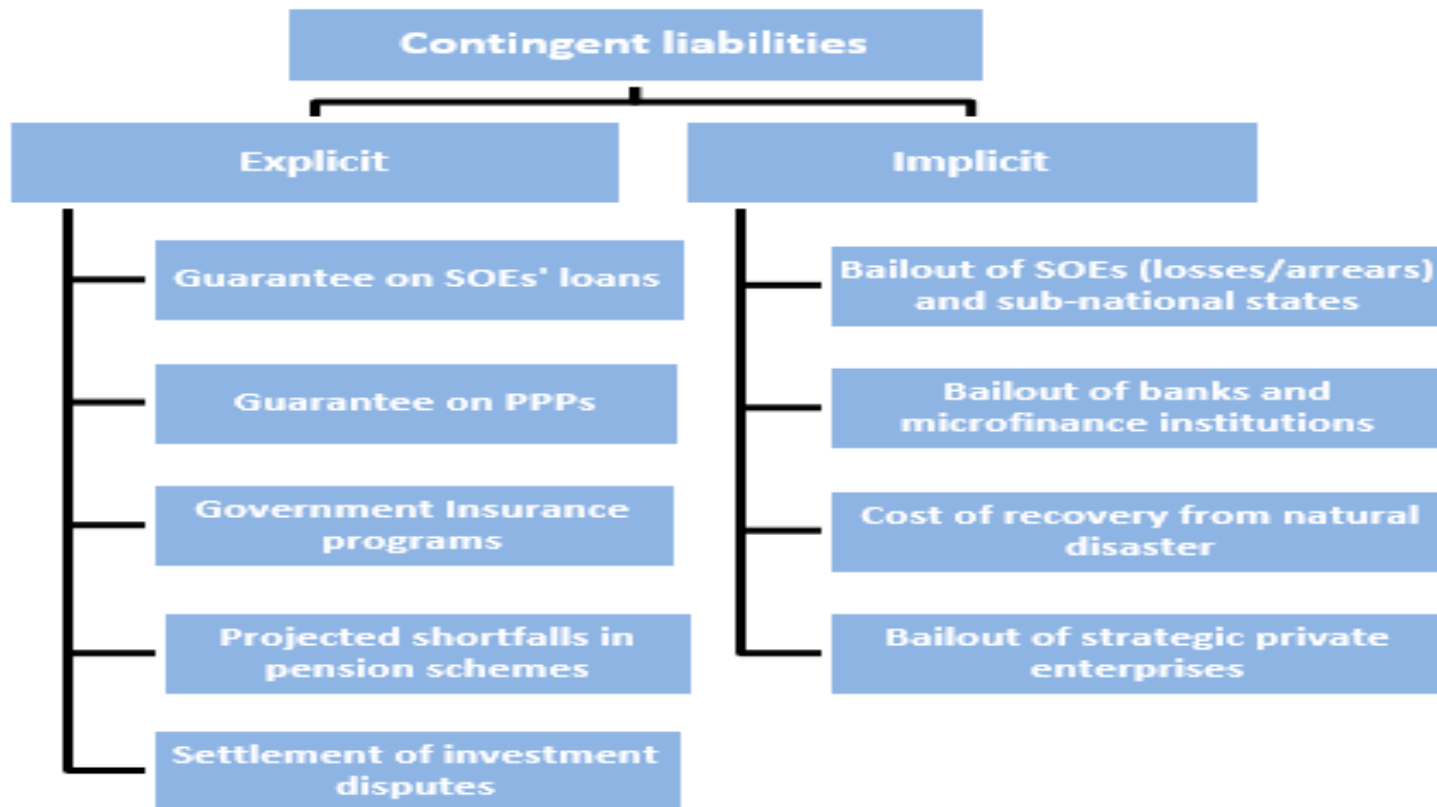


Fiscal Balance



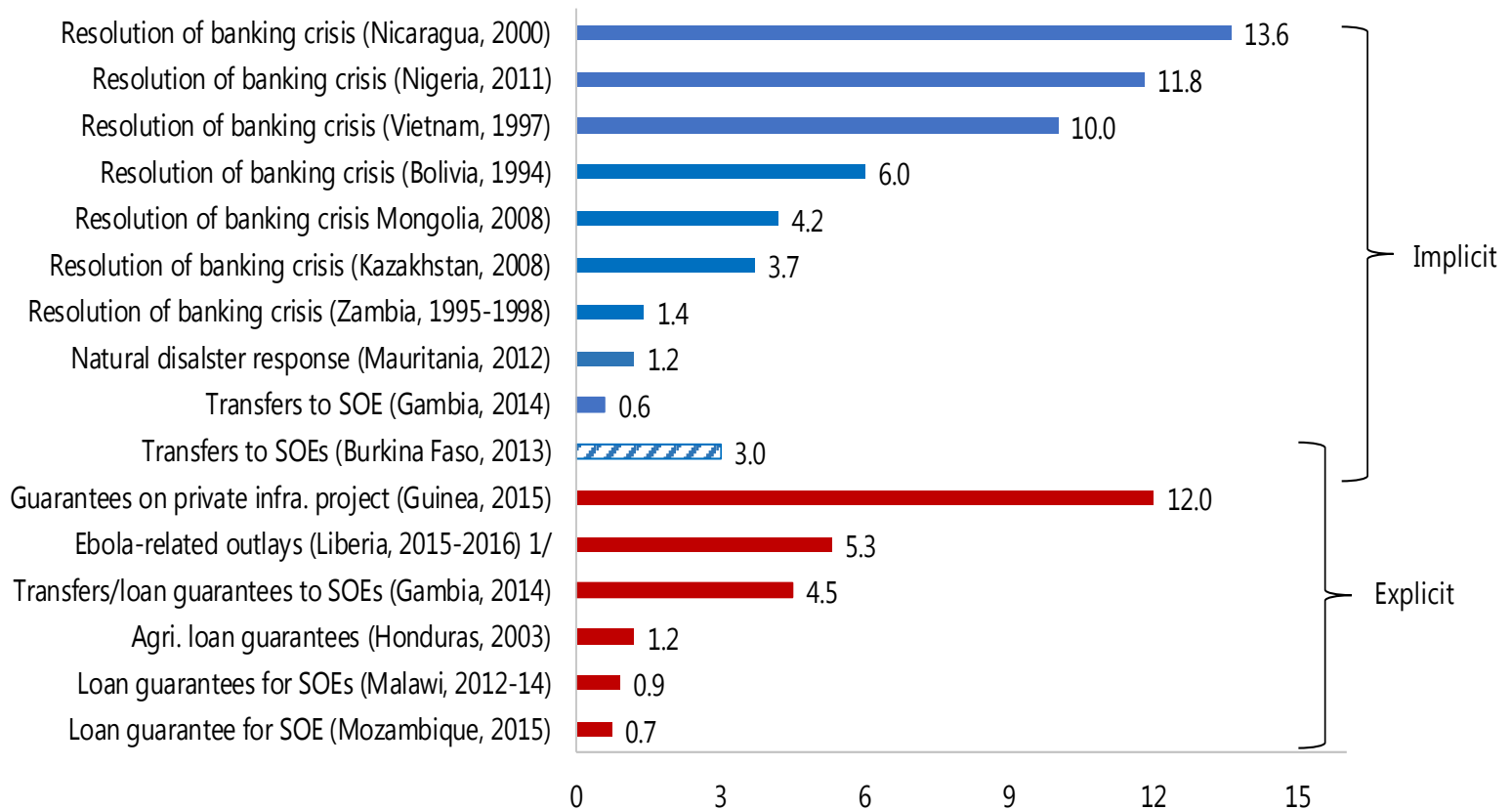
III. Fiscal Risks in LICs

a. Main sources of Contingent Liabilities in LIC's

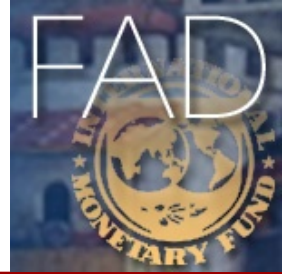


III. Fiscal Risks in LICs

b. Materialized Contingent Liabilities in LICs



1/ 3.2 percent of GDP for 2015 and 2.1 percent of GDP for 2016. The amount covers only the cost that the government acknowledges.



IV. Understanding and Management of Fiscal Risks

a. Fiscal Transparency Code

Risk Disclosure & Analysis

- Macroeconomic Risks
- Specific Fiscal Risks
- Long-Term Sustainability

Risk Management

- Budgetary Contingencies
- Asset and Liability Management
- Guarantees, PPPs and Financial Sector
- Natural Resources and Environmental

Fiscal Coordination

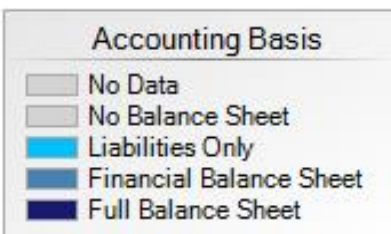
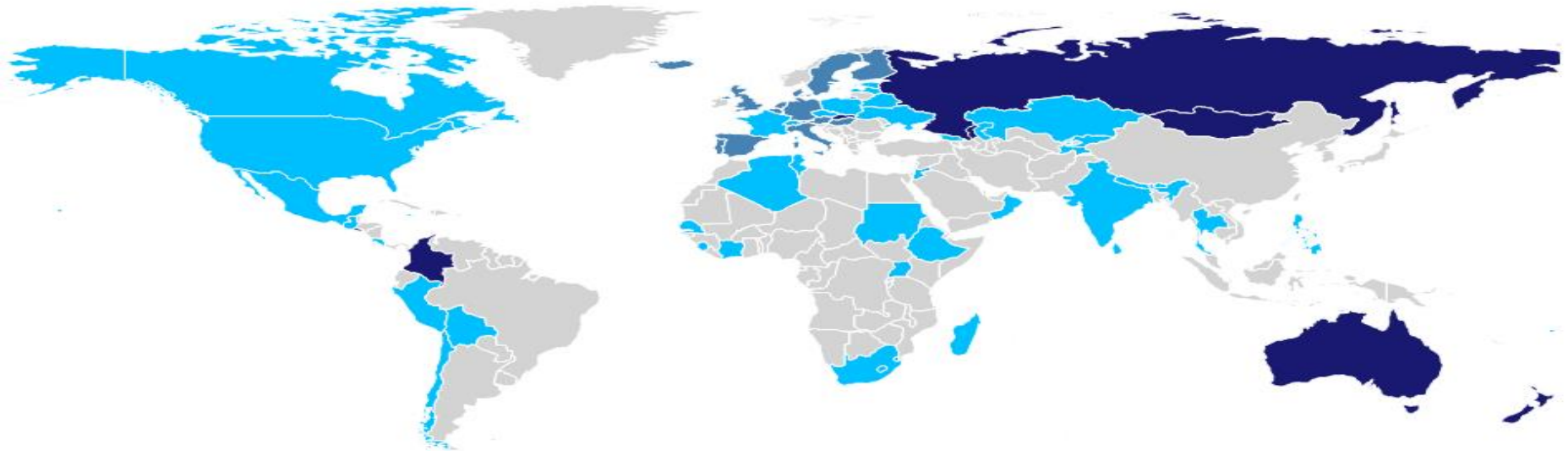
- Sub-National Governments
- Public Corporations

IV. Understanding & Management of Fiscal Risks

b. Balance sheet data has improved

Coverage of Balance Sheet Data (GFS)

2003

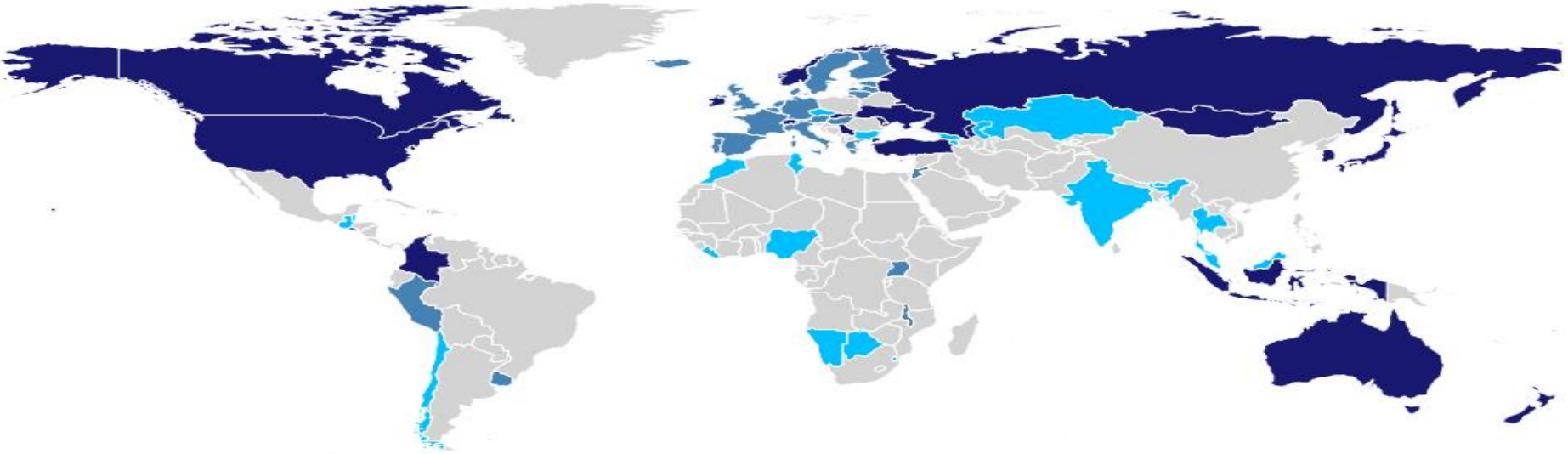


IV. Understanding & Management of Fiscal Risks

c. Balance sheet data has improved

Coverage of Balance Sheet Data (GFS)

2013



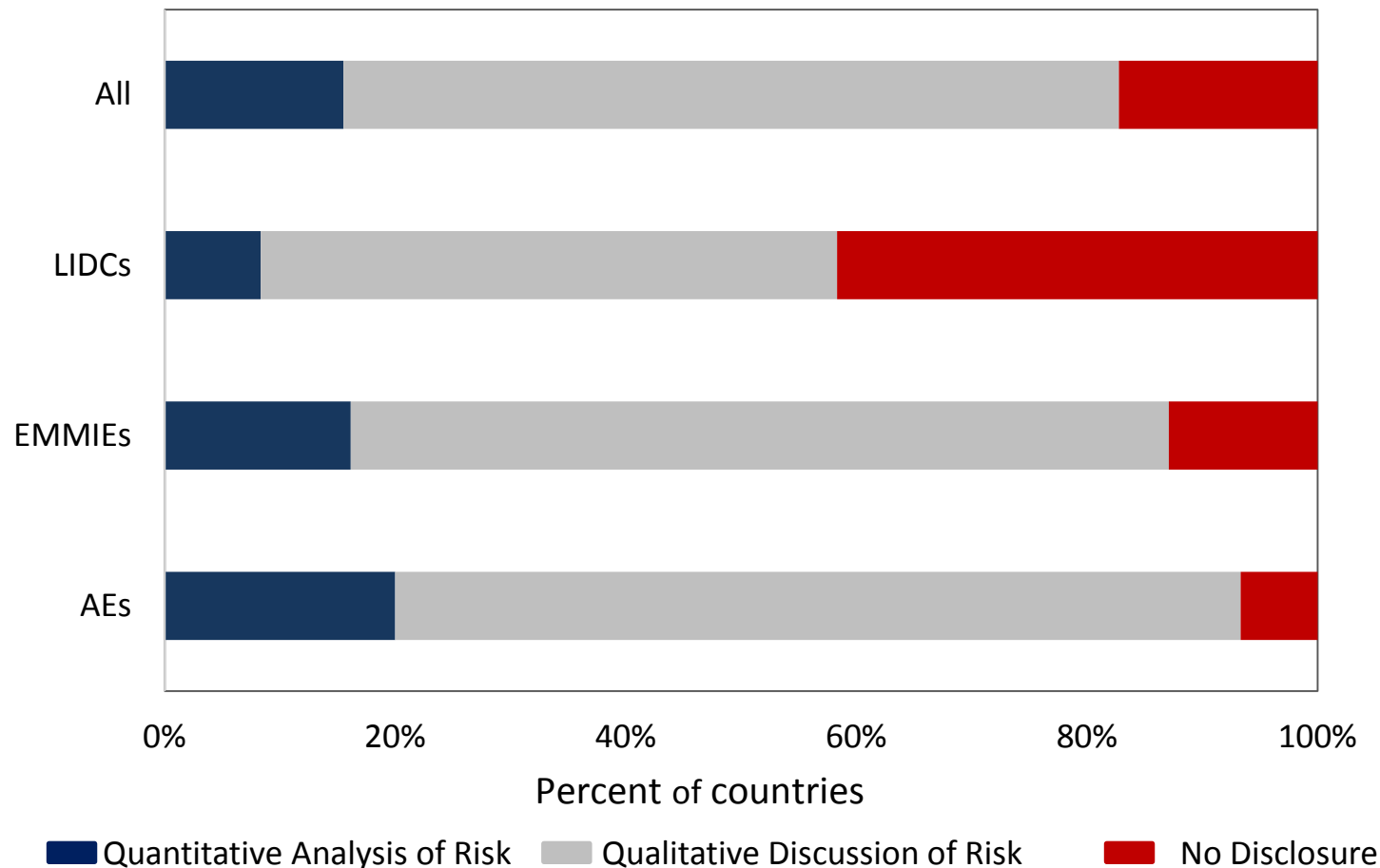
Accounting Basis	
	No Data
	No Balance Sheet
	Liabilities Only
	Financial Balance Sheet
	Full Balance Sheet

Source: COFA Database

IV. Understanding & Management of Fiscal Risks

d. Disclosure of risks remains qualitative

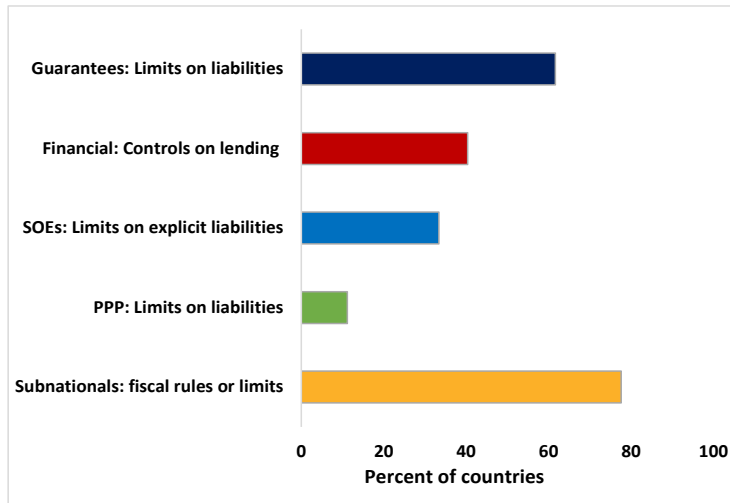
Contingent Liabilities



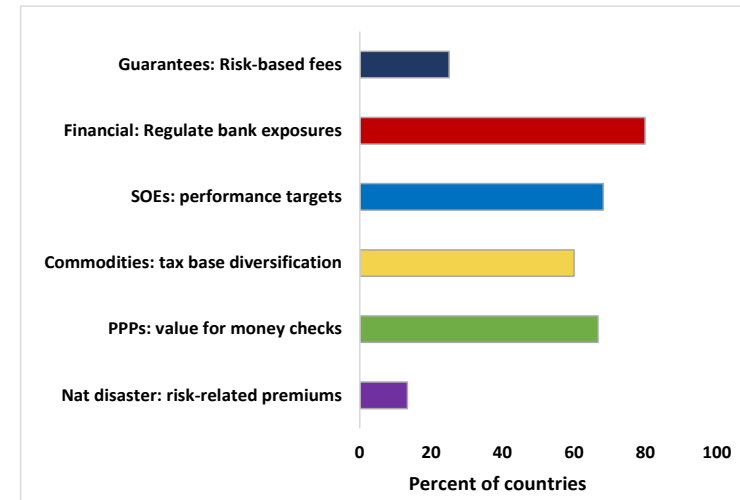
IV. Understanding & Management of Fiscal Risks

e. Mitigation efforts are ad hoc and fragmented

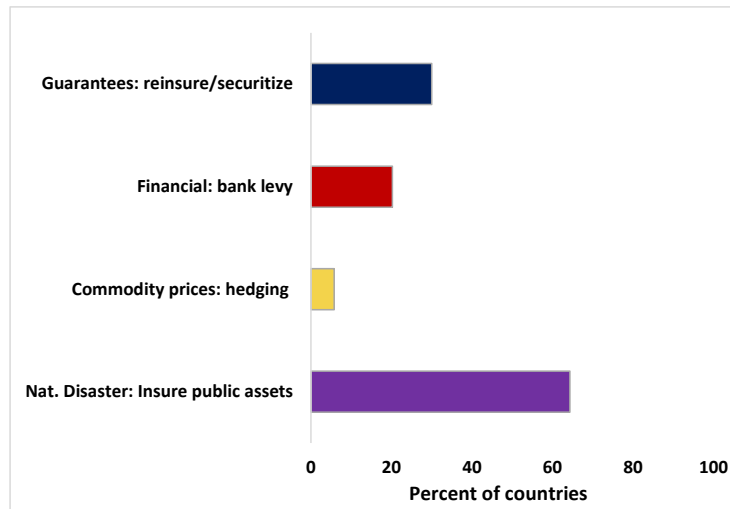
Direct controls and limits on exposure



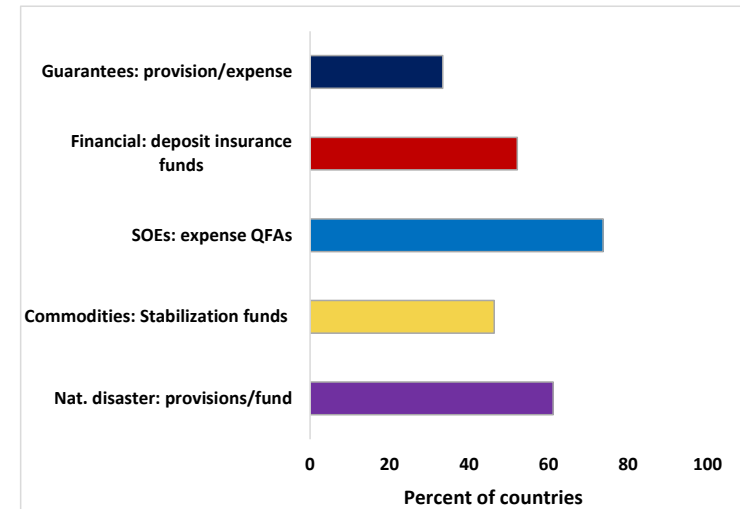
Regulations, incentives, and other measures



Transfer or sharing of risks



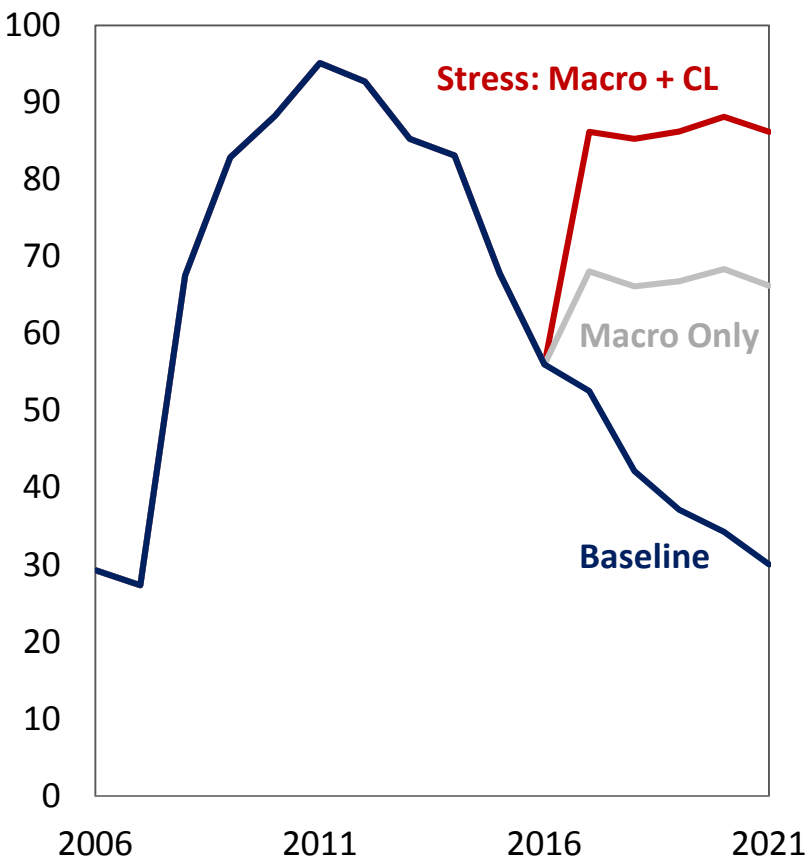
Budget provisioning



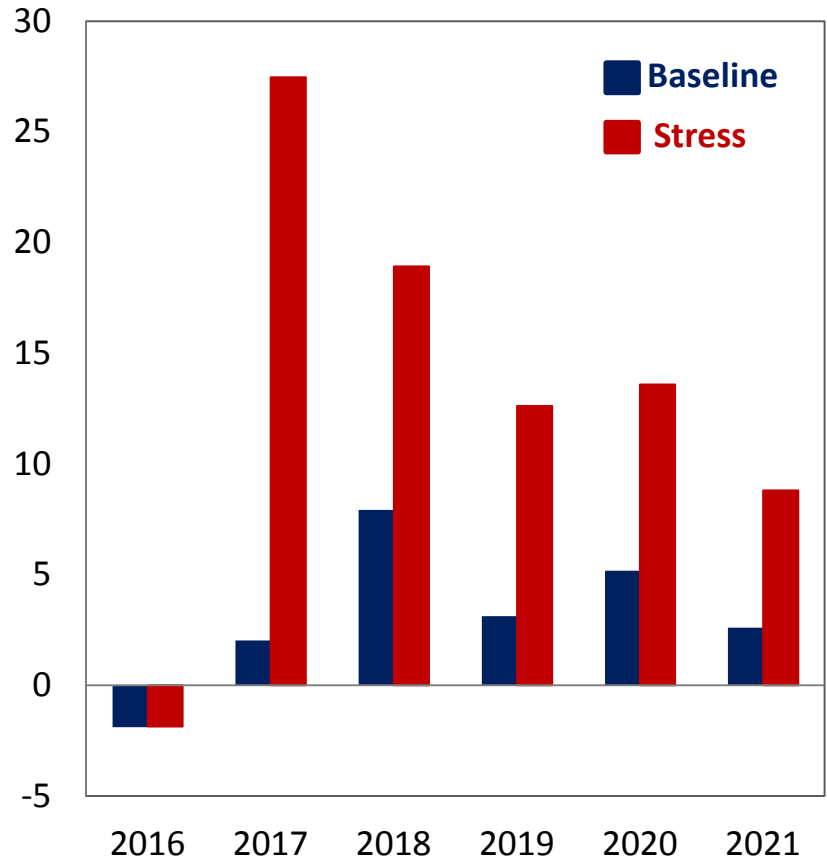
V. Strengthening Fiscal Risk Analysis & Mitigation:

a. Fiscal Stress Test – debt and liquidity

Public Debt
(Percent of GDP)



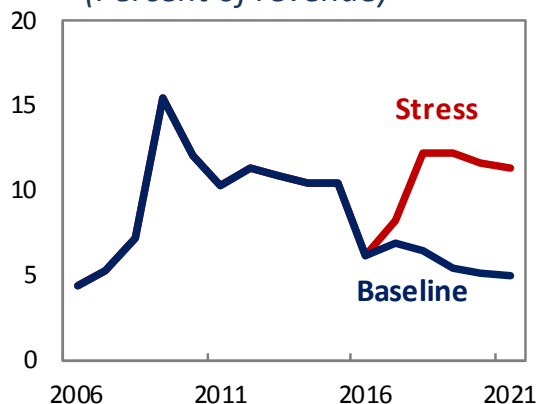
Liquidity: Gross Financing
(Percent of GDP)



V. Strengthening Fiscal Risk Analysis & Mitigation:

b. Fiscal Stress Test – solvency and fiscal burden

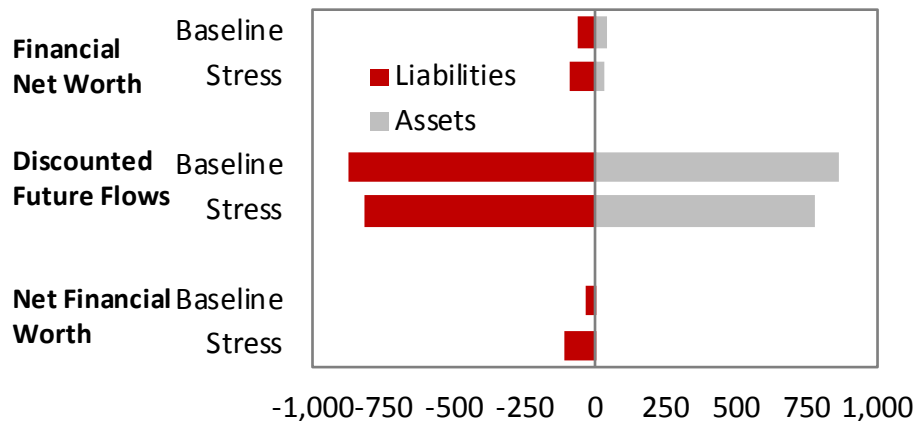
Fiscal Burden: Interest Cost
(Percent of revenue)



Comprehensive Balance Sheet
(Percent of 2017 baseline GDP)

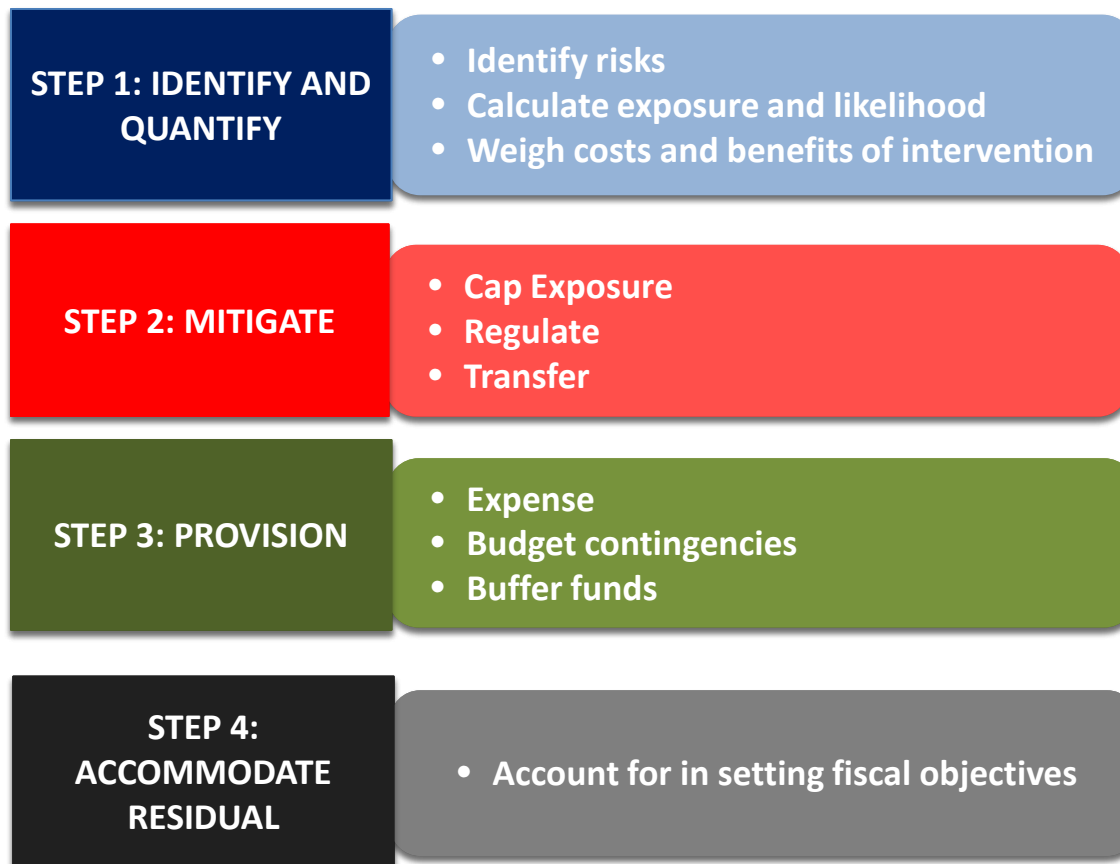
	Baseline	Shock
Financial assets	903.5	811.1
Currency and deposits	9.2	9.0
Loans	8.5	8.4
Shares and other equities	17.9	9.0
Other accounts receivable	7.0	7.0
NPV Revenues	860.2	777.0
Liabilities	942.9	918.6
Securities other than shares	21.8	42.8
Loans	20.4	27.3
Insurance technical reserves	18.0	18.1
Other accounts payable	7.4	7.4
NPV Expenditures	875.3	823.0
Net Financial Worth	-39.4	-107.6
Existing Net Financial Worth	-24.3	-61.6
Future discounted deficits	-15.1	-46.0

Solvency: Net Financial Worth
(Percent of 2017 GDP)



V. Strengthening Fiscal Risk Analysis & Mitigation:

c. Fiscal Risk Management Toolkit



VI. Conclusions

a. Fiscal risk analysis

- Low capacity countries should focus on
 - *macro-fiscal sensitivity analysis*
 - *financial balance sheet*
 - *disclosing explicit contingent liabilities*

- Intermediate capacity countries should prioritize
 - *alternative macro-fiscal scenarios*
 - *full balance sheets*
 - *disclosing all contingent liabilities*

- High capacity countries should concentrate on
 - *disclosing the size and probability of contingent liability realizations*
 - *periodic fiscal stress tests*

VI. Conclusions

b. Fiscal risk management

- All countries should *strengthen their institutional arrangements for monitoring and managing risks*
- Low capacity countries should look to *strengthen direct controls and centralize approval of explicit contingent liabilities*
- Intermediate capacity countries should prioritize *more effective use of risk mitigation and transfer tools*
- Advanced capacity countries should *build risk exposure into fiscal plans*