

Using Public Sector Balance Sheets to Manage Fiscal Risks

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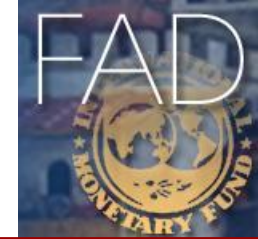
March 6, 2017



Overview

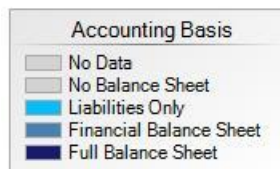
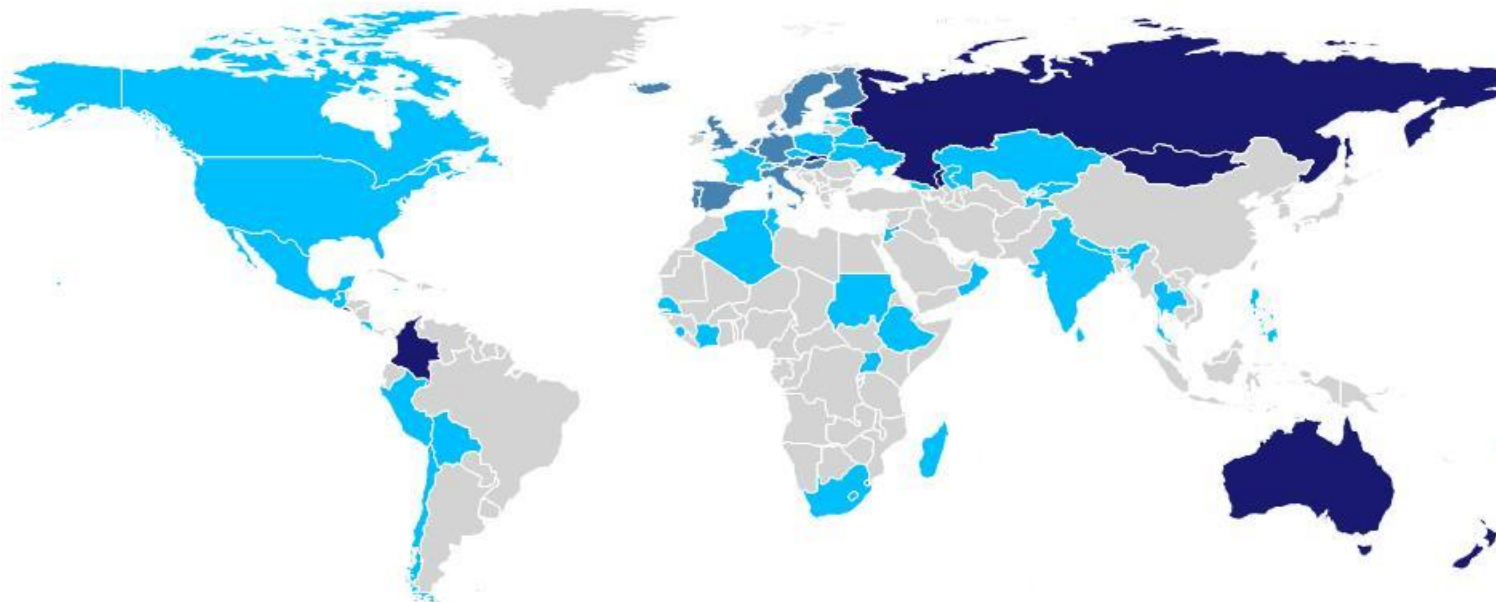
- 1. Countries have made some progress in producing balance sheets**
- 2. But, they are not always used for fiscal analysis**
- 3. There is scope to make them more relevant**
- 4. And to inform more integrated balance sheet and fiscal risk management**

Reporting of statistical balance sheets is improving



Coverage of Balance Sheet Data (GFS)

2003

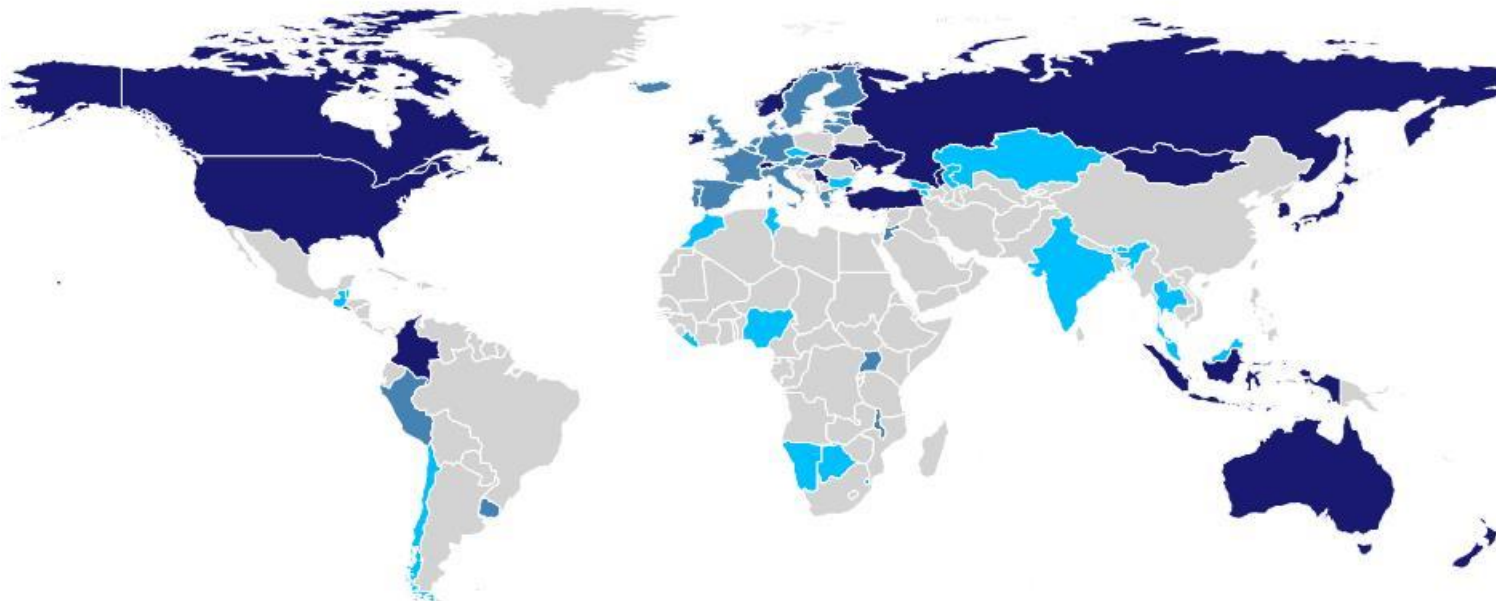


Reporting of statistical balance sheets is improving



Coverage of Balance Sheet Data (GFS)

2013

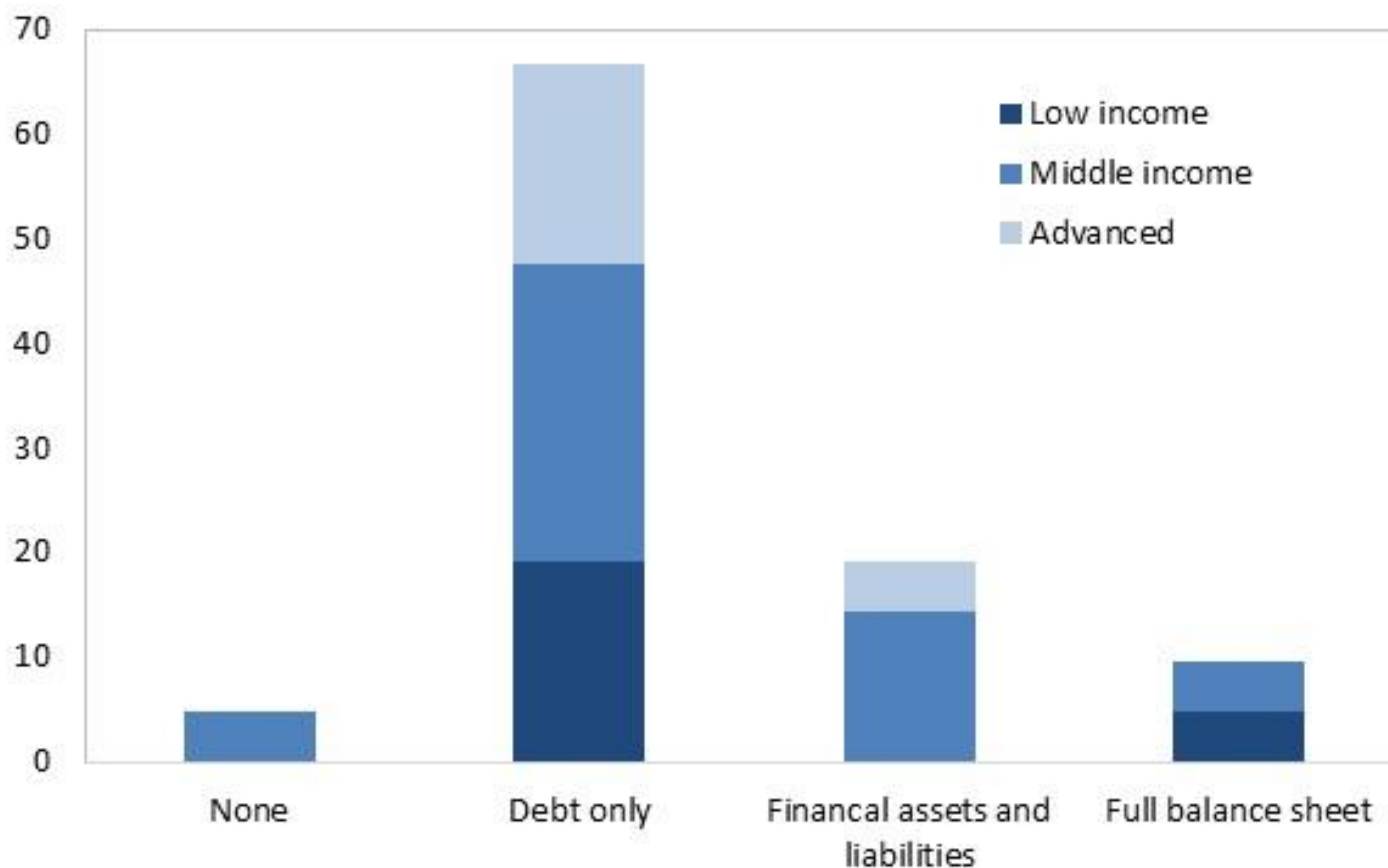


Accounting Basis	
	No Data
	No Balance Sheet
	Liabilities Only
	Financial Balance Sheet
	Full Balance Sheet

Reporting gaps also translate into gaps in analysis and management



Asset and Liability Management: (percent of countries)



Source: IMF Fiscal Transparency Evaluations for 21 countries for which they have been conducted.

Scope for balance sheets to better inform risk management practices



- Identification and valuation of assets
- More integrated approaches to asset and liability management
- More appropriate accounting for “off-budget” activities
- More robust assessments of fiscal sustainability

Factors limiting role in risk management

- **Backward looking and come too late**
- **Limited linkages between balance sheet and fiscal policy or fiscal targets**
- **Some rights and obligations are excluded**
 - Prospective or implicit rights and obligations
 - Potential contingent liability realizations
- **Limited picture of sustainability of tax and spending policies**

Using the balance sheet as a tool for fiscal policy and risk analysis



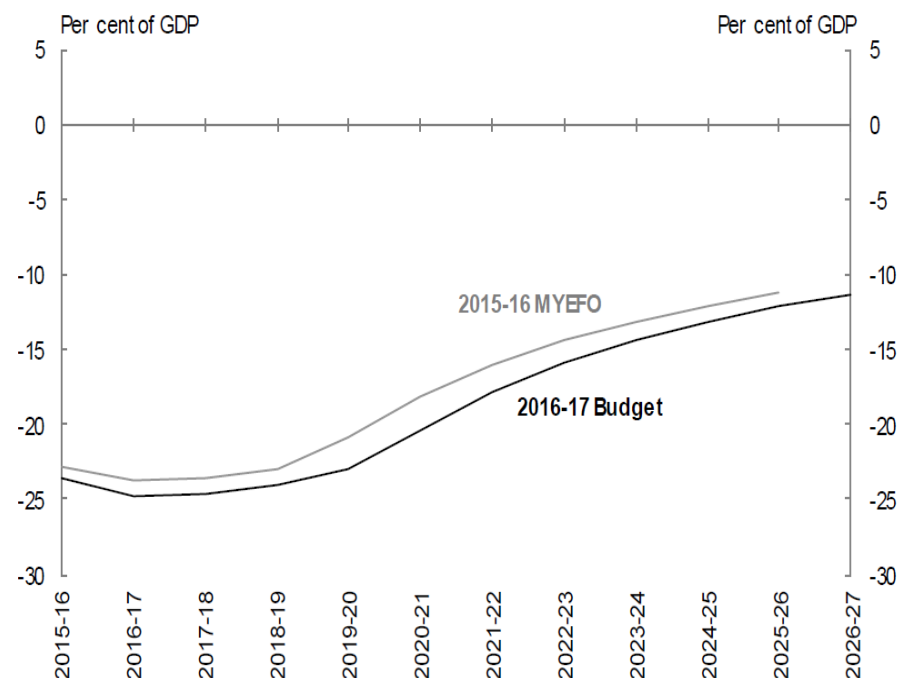
- **Use balance sheets to inform fiscal strategy and objectives:**
 - Move away from debt/fiscal balance focus, towards broader balance sheet measures (e.g. net worth)
- **Assess balance sheet impacts of policy decisions**
 - Include non-debt costs and benefits of planned equity investments
 - Take risk into account for financial assets and obligations
- **Include balance sheet projections within the budget**
 - Extend macro and fiscal projections to include balance sheet components
 - Impact of macro variables (interest, exchange and equity)
- **Developing a comprehensive balance sheet**
 - Bring together accounting balance sheet, expected contingent liability realizations, and long-term sustainability e.g., NZ
- **Stress test public sector balance sheets**
 - IMF Fiscal stress test

Australia: Produces forecast balance sheets to guide fiscal policymaking

Forecast Balance Sheet Aggregates

	Estimates			Projections	
	2015-16	2016-17	2017-18	2018-19	2019-20
	\$b	\$b	\$b	\$b	\$b
Financial assets	342.6	383.4	414.0	432.2	453.4
Non-financial assets	122.9	126.2	130.6	134.9	139.7
Total assets	465.4	509.6	544.6	567.2	593.1
Total liabilities	730.4	810.6	859.2	886.6	909.2
Net worth	-265.0	-300.9	-314.6	-319.4	-316.1
Net financial worth(a)	-387.9	-427.2	-445.2	-454.3	-455.8
Per cent of GDP	-23.5	-24.8	-24.6	-24.0	-22.9
Net debt(b)	285.7	326.0	346.8	356.4	355.1
Per cent of GDP	17.3	18.9	19.2	18.8	17.8

Projections of Net Financial Worth





Developing Comprehensive Balance Sheets

Comprehensive Net Worth

NZ\$ billion		Assets	Liabilities	Net Worth
Based on accounting principles	Social	130	86	44
	Financial	122	96	25
	Commercial	23	11	13
Accounting Net Worth		275	193	82
Add	Contingent Liabilities	0	18	(18)
Add	NPV future expenses & revenue	785	886	(101)
Comprehensive Net Worth		1078	1098	(20)

Note: Figures are illustrative only.

Fiscal Risk– All of the assets and liabilities have the potential to create fiscal risk. This impacts comprehensive net worth immediately and GAAP net worth eventually.

Social Assets – Tangible assets, primarily P&E, used to support the delivery of social services.

Financial and Commercial Assets – Assets held to fund contractual or social obligations such as New Zealand Superannuation.

Accounting Net Worth – Cumulative impact of past decisions

Contingent Liabilities – An estimate of the value of both contingent and implicit liabilities.

Fiscal – Estimates of the present value of future Government spending and income

Comprehensive Net Worth – Combines balance sheet, expected losses from CL realizations, and NPV of future policies

Stress testing public balance sheets

- **Conventional macro-fiscal risk analysis tends to:**
 - Focus on deficit and gross debt;
 - Assume shocks are relatively modest in size;
 - Analyze fiscal risks as independent of each other
- **But, fiscal risks can be large, come from a variety of sources, are highly correlated.**
- **Highlights need for more integrated approaches to fiscal risk analysis.**

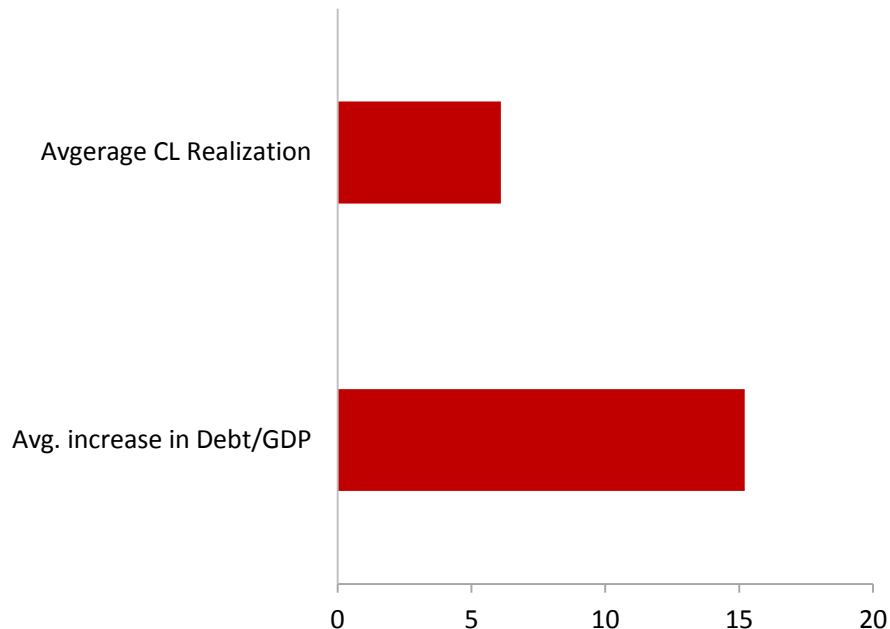
Stress testing public balance sheets

- **Fiscal Stress Testing can be used to test the resilience of public balance sheets**
 - Range of alternative scenarios, with integrated, rather than discrete approach
 - Assess more extreme shocks; rather than year-to-year volatility
 - Correlated shocks of relevant macroeconomic variables
 - Assess impact on assets, liabilities, and future flows
 - Realization of contingent liabilities

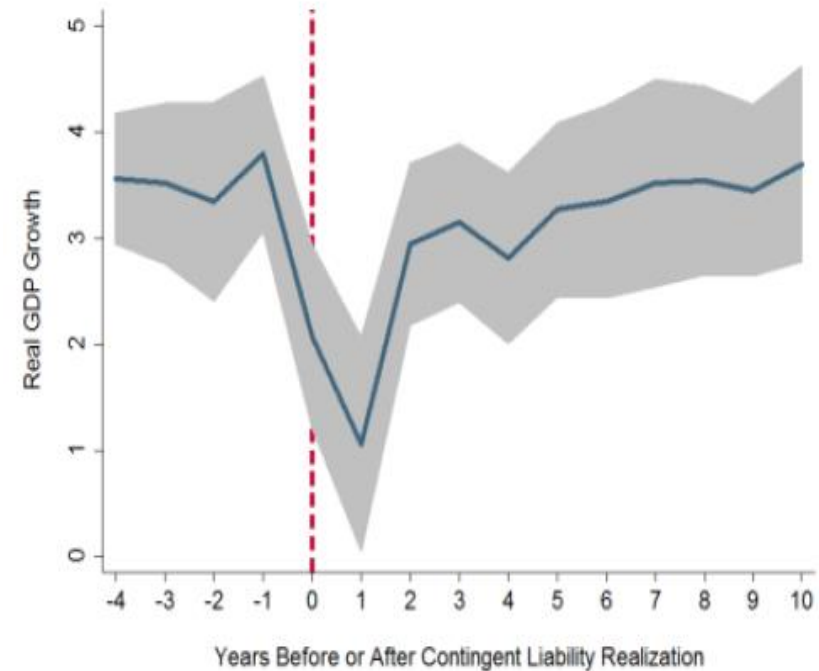
Stress testing public balance sheets

Contingent liability realizations are correlated with GDP shocks and with each other....

CL Realizations vs Increase in Debt



GDP and CL Realizations



Source: Bova, E., M. Ruiz-Arranz, F. Toscani, and H. E. Ture, 2016, "The Fiscal Costs of Contingent Liabilities: A New Dataset," IMF Working Paper 16/14 (Washington: International Monetary Fund).

Stress testing public balance sheets

The IMF's new fiscal stress test



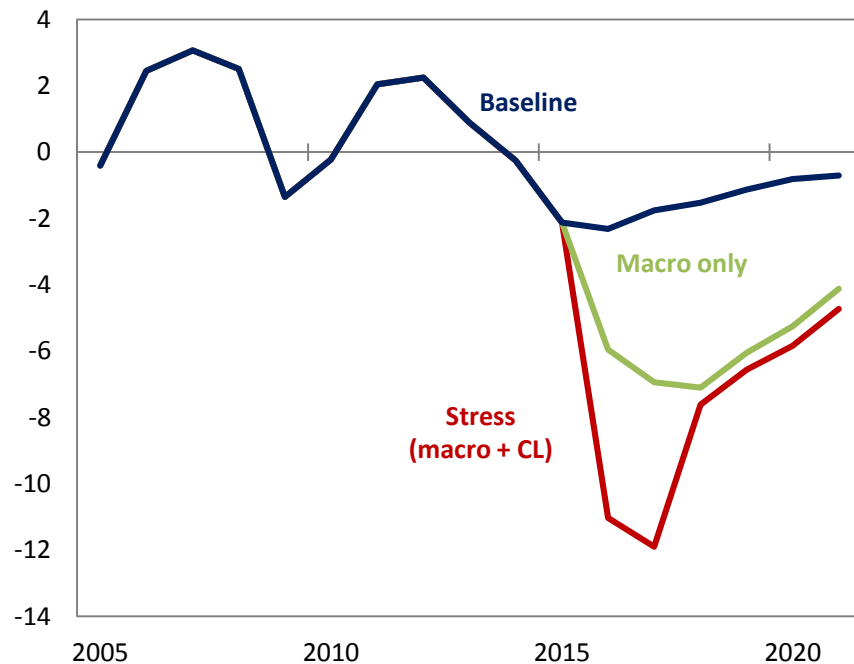
- The IMF's Fiscal Stress Test looks at the impact of shocks on fiscal flows and balance sheet aggregates
- FSTs provide three summary outputs for use in assessing fiscal risks:
 - **Solvency:** change in the governments comprehensive net worth
 - **Liquidity risk:** gross financing needs
 - **Fiscal burden:** interest expenses as share of government revenue

Stress testing public balance sheets

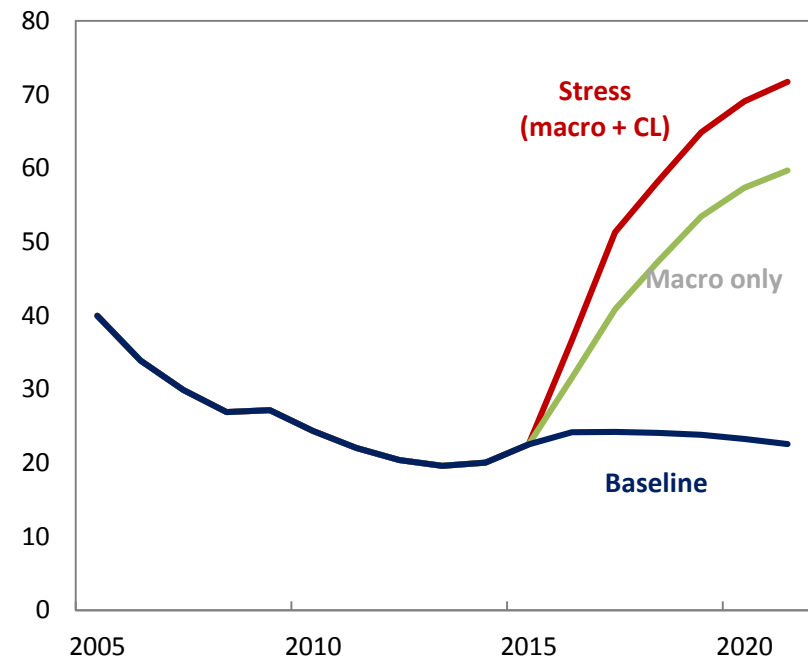
IMF's fiscal stress test: fiscal balance and debt shocks

Peru Illustrative Stress Test

Fiscal Balance
(Percent of GDP)



Public Debt
(Percent of GDP)



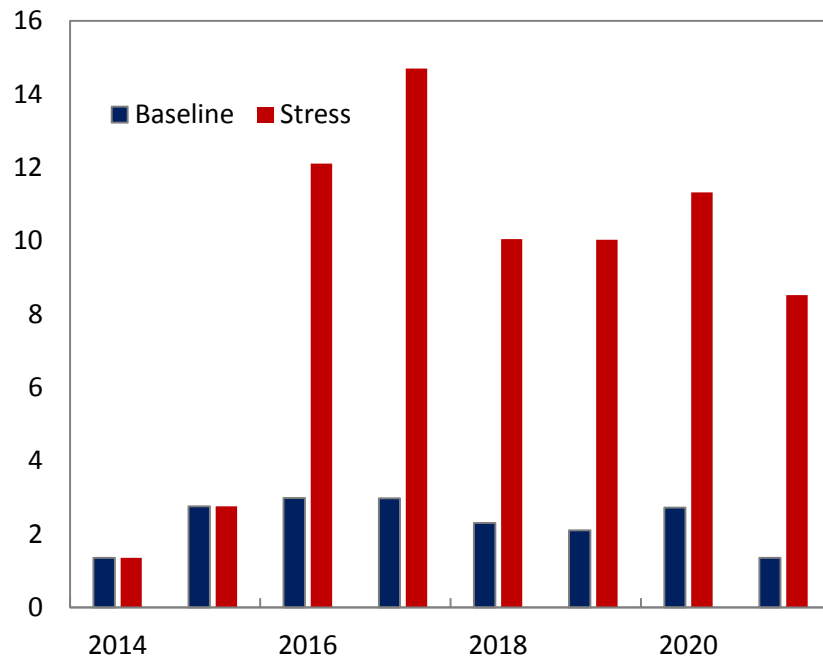
Source: IMF (2016) "Analyzing and Managing Fiscal Risks – Best Practices," IMF Policy Paper, June (Washington: International Monetary Fund).

Stress testing public balance sheets

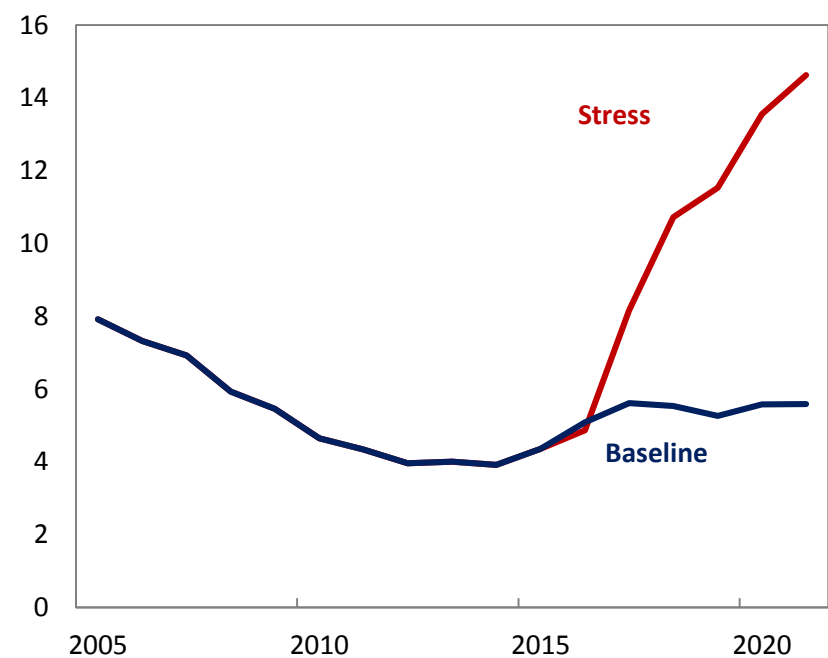
IMF's fiscal stress test: liquidity and fiscal burden

Peru Illustrative Stress Test

Gross Financing
(Percent of GDP)



Fiscal Burden: Interest
(Percent of Revenue)



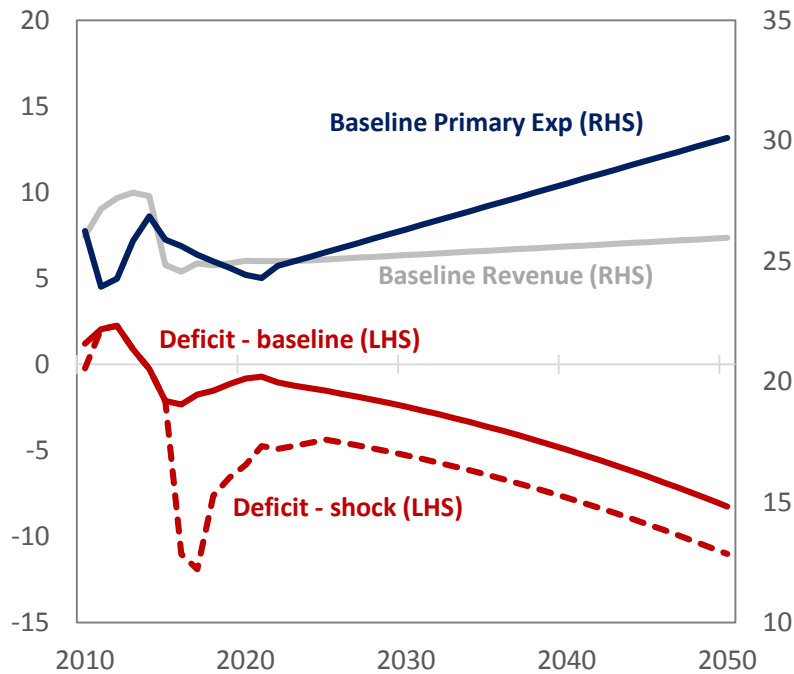
Source: IMF (2016) "Analyzing and Managing Fiscal Risks – Best Practices," IMF Policy Paper, June (Washington: International Monetary Fund).

Stress testing public balance sheets

IMF's fiscal stress test: solvency

Peru Illustrative Stress Test

Long-Run Projections
(Percent of GDP)



Solvency: Net Financial Worth
(Percent of 2017 GDP)



Source: IMF (2016) "Analyzing and Managing Fiscal Risks – Best Practices," IMF Policy Paper, June (Washington: International Monetary Fund).

Conclusions



1. Countries have made some progress in producing balance sheets
2. But, this has been slow to translate into more active approaches to managing fiscal risks
3. Challenges remain around how to better integrate balance sheets and risk analysis into fiscal policymaking
4. Development of more comprehensive balance sheets can help policymakers better understand their underlying fiscal position
5. And, inform more integrated balance sheet and fiscal risk analysis and management