



Sovereign Fiscal Responsibility Index 2011: Accompanying Exhibits to Executive Summary

Stanford University and the Comeback America Initiative (CAI)

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Stanford University Public Policy and International Studies Programs

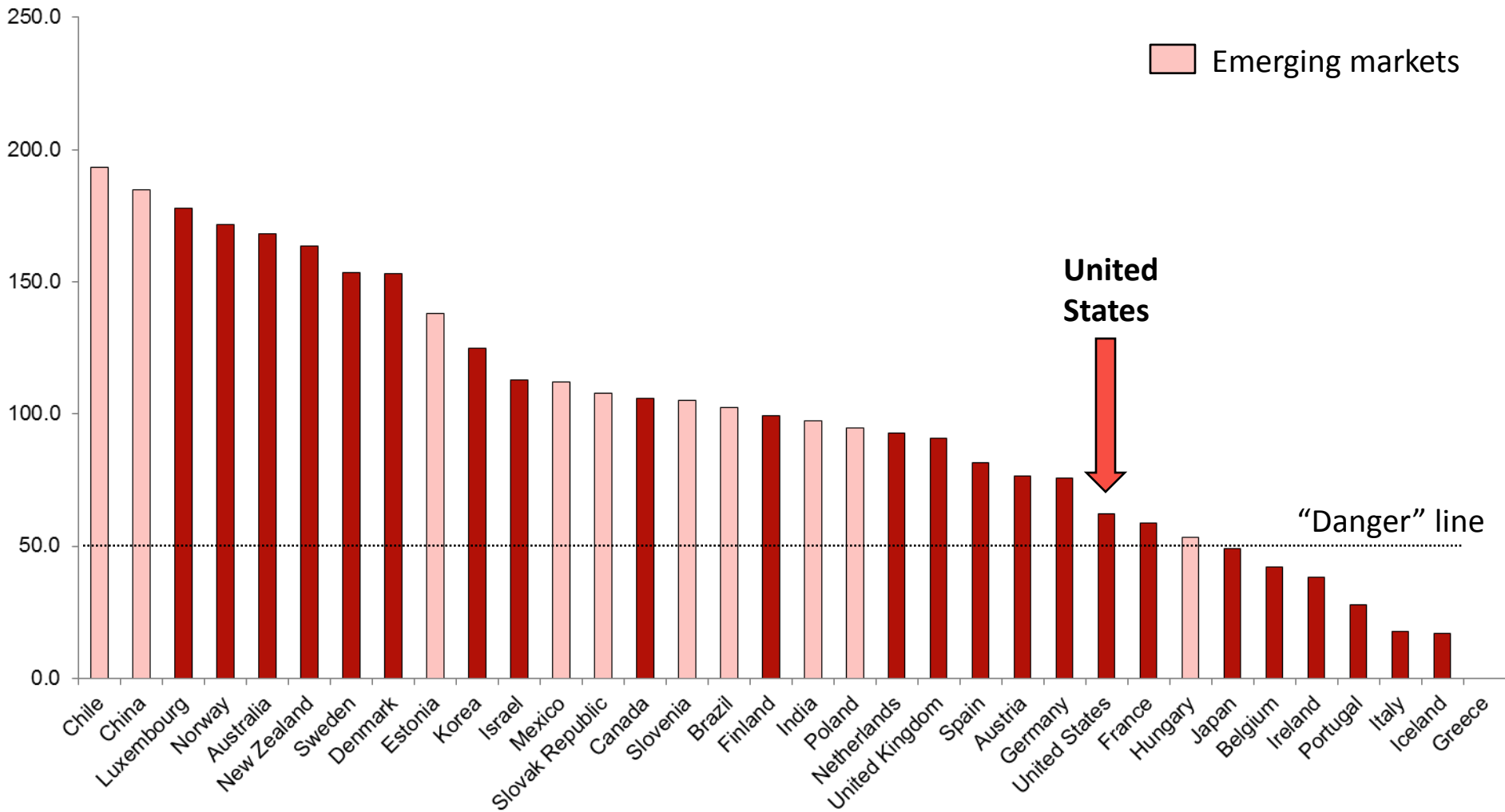
Prepared by T.J. Augustine, Alex Maasry, Dami Sobo and Di Wang under the guidance of: Hon. David M. Walker, Founder and CEO of the Comeback America Initiative and former Comptroller General of the United States

Contents

- **Results of 3 main components of the Sovereign Fiscal Responsibility Index (SFRI)**
- United States Fiscal Path, Baseline vs. NFRRC Plan
- Overview of the SFRI
- Detailed methodology and example calculations for 3 main components of the SFRI

Fiscal Space: Results

Fiscal Space by Country
% of Gross Domestic Product (GDP)



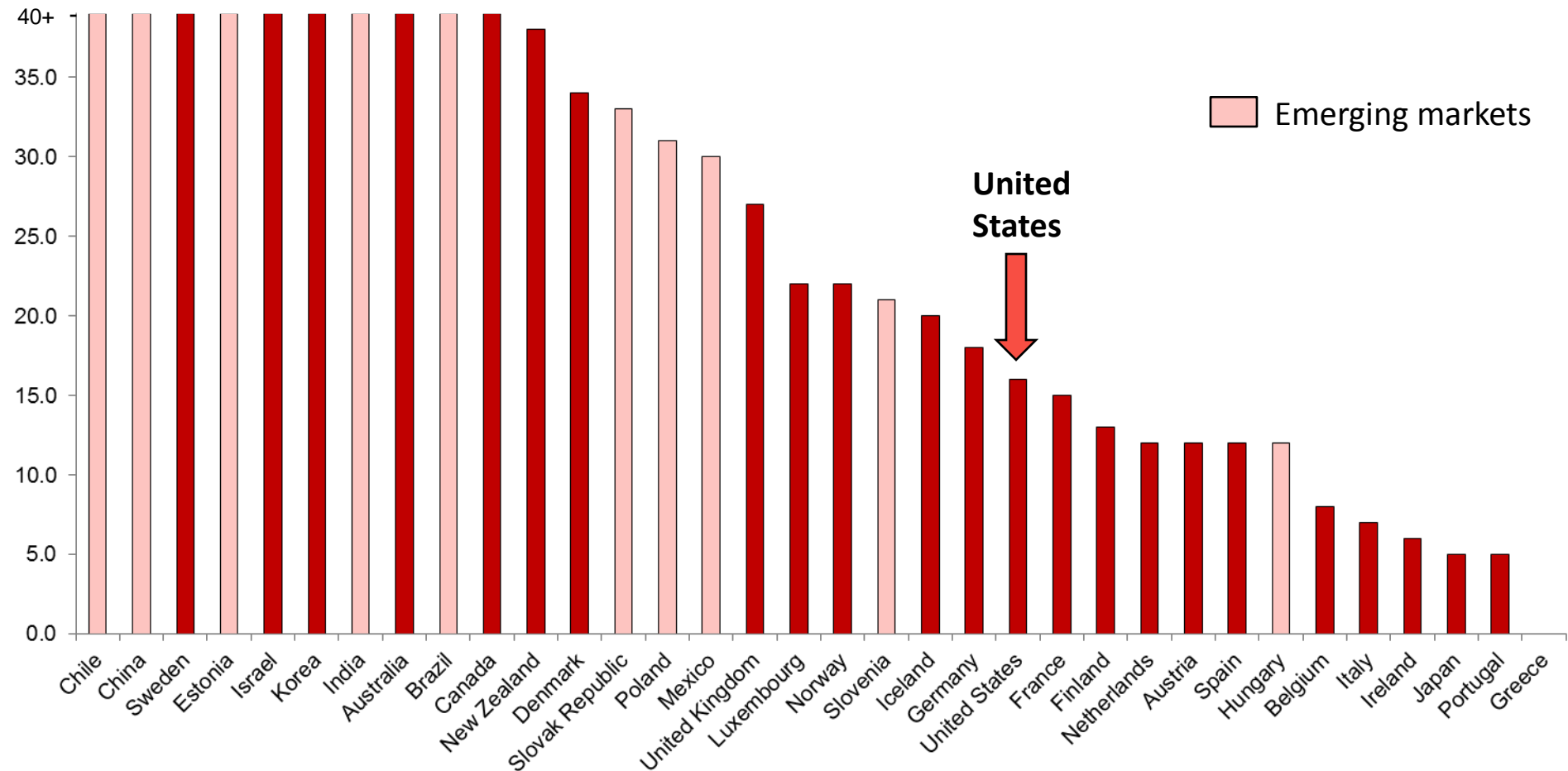
Source: IMF, OECD, country central statistics bureaus, team analysis

Fiscal Path: Results

Fiscal Path by Country

of years until Fiscal Space runs out

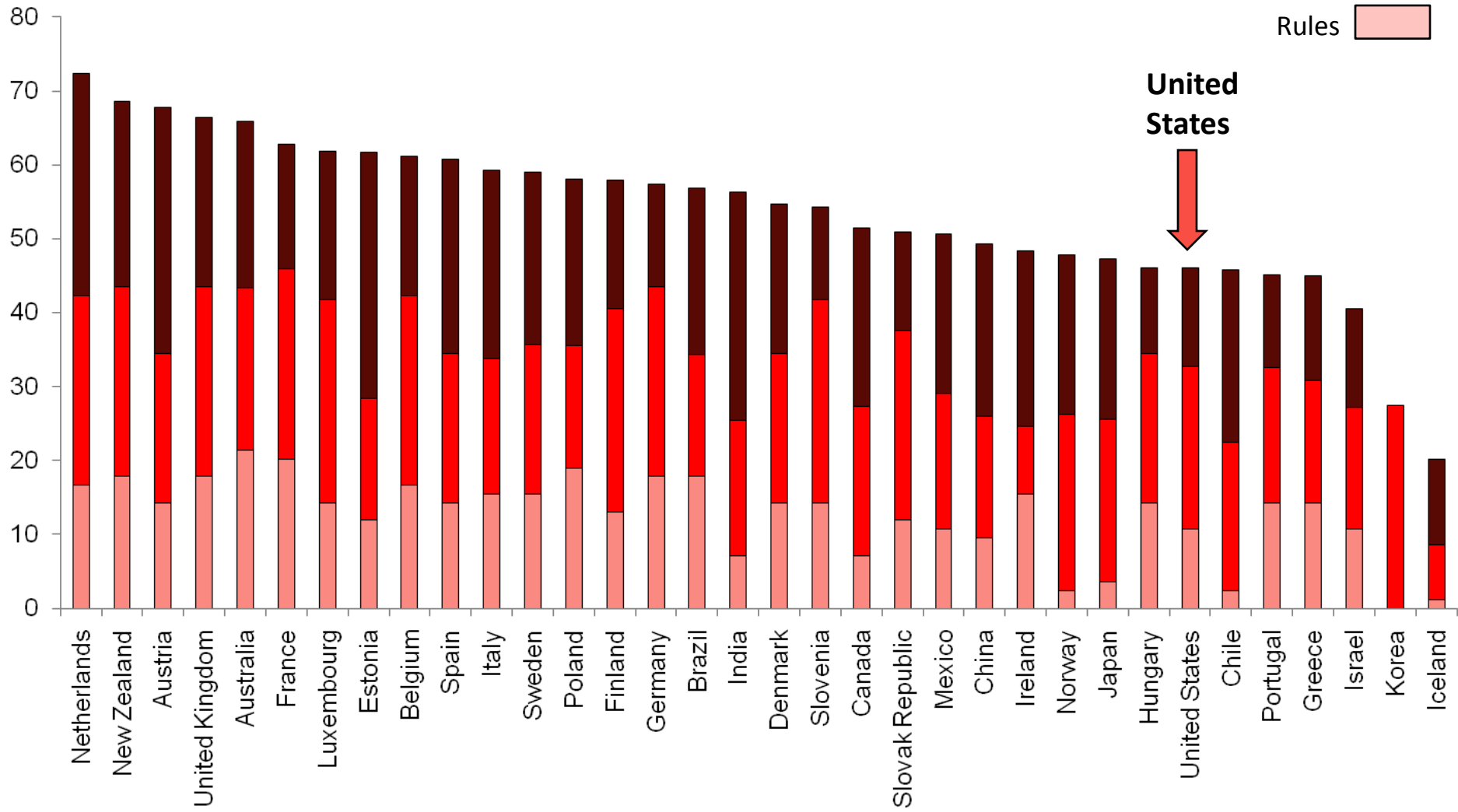
Note: countries with 40+ years in chart do not hit debt ceiling by 2050 (i.e. may have much more than 40 years until reaching debt ceiling, if ever)



Fiscal Governance: Results

Fiscal Transparency by Country
Points

- Enforceability
- Transparency
- Rules



Overall SFRI: Results

Overall SFRI Results

Country	Fiscal Space (% of GDP)	Fiscal Path (# of years)	Fiscal Governance (pts of 100)	Overall Rank
Australia	168.2	40+	65.9	1
New Zealand	163.6	38.0	68.5	2
Estonia	138.1	40+	61.7	3
Sweden	153.7	40+	59.0	4
China	184.9	40+	49.4	5
Luxembourg	178.0	22.0	61.8	6
Chile	193.3	40+	45.9	7
Denmark	153.1	34.0	54.7	8
United Kingdom	90.8	27.0	66.4	9
Brazil	102.3	39.0	56.9	10
Canada	106.0	39.0	51.5	11
India	97.3	40+	56.3	12
Poland	94.9	31.0	58.0	13
Netherlands	92.7	12.0	72.3	14
Norway	171.6	22.0	47.9	15
Slovak Republic	107.7	33.0	50.9	16
Korea	124.9	40+	27.5	17
Mexico	112.1	30.0	50.7	18
Israel	113.0	40+	40.5	19
Slovenia	105.2	21.0	54.3	20
Austria	76.4	12.0	67.8	21
Finland	99.2	13.0	57.9	22
France	58.7	15.0	62.8	23
Spain	81.5	12.0	60.7	24
Germany	75.7	18.0	57.4	25
Belgium	42.3	8.0	61.2	26
Italy	17.8	7.0	59.2	27
United States	62.4	16.0	46.0	28
Hungary	53.2	12.0	46.1	29
Ireland	38.1	6.0	48.4	30
Japan*	49.0	5.0	47.2	31
Iceland**	17.1	20.0	20.2	32
Portugal	27.8	5.0	45.1	33
Greece	0.0	0.0	45.0	34

* Japan's debt has just been downgraded by Moody's (01/29/11)

** Iceland has already defaulted and its Sustainable Fiscal path reflects reforms made since default occurred

Overall SFRI: Results with US under NFRRC Plan

Overall SFRI Results

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* National Fiscal Responsibility and Reform Commission, "Moment of Truth"

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*** Iceland has already defaulted and its Sustainable Fiscal path reflects reforms made since default occurred

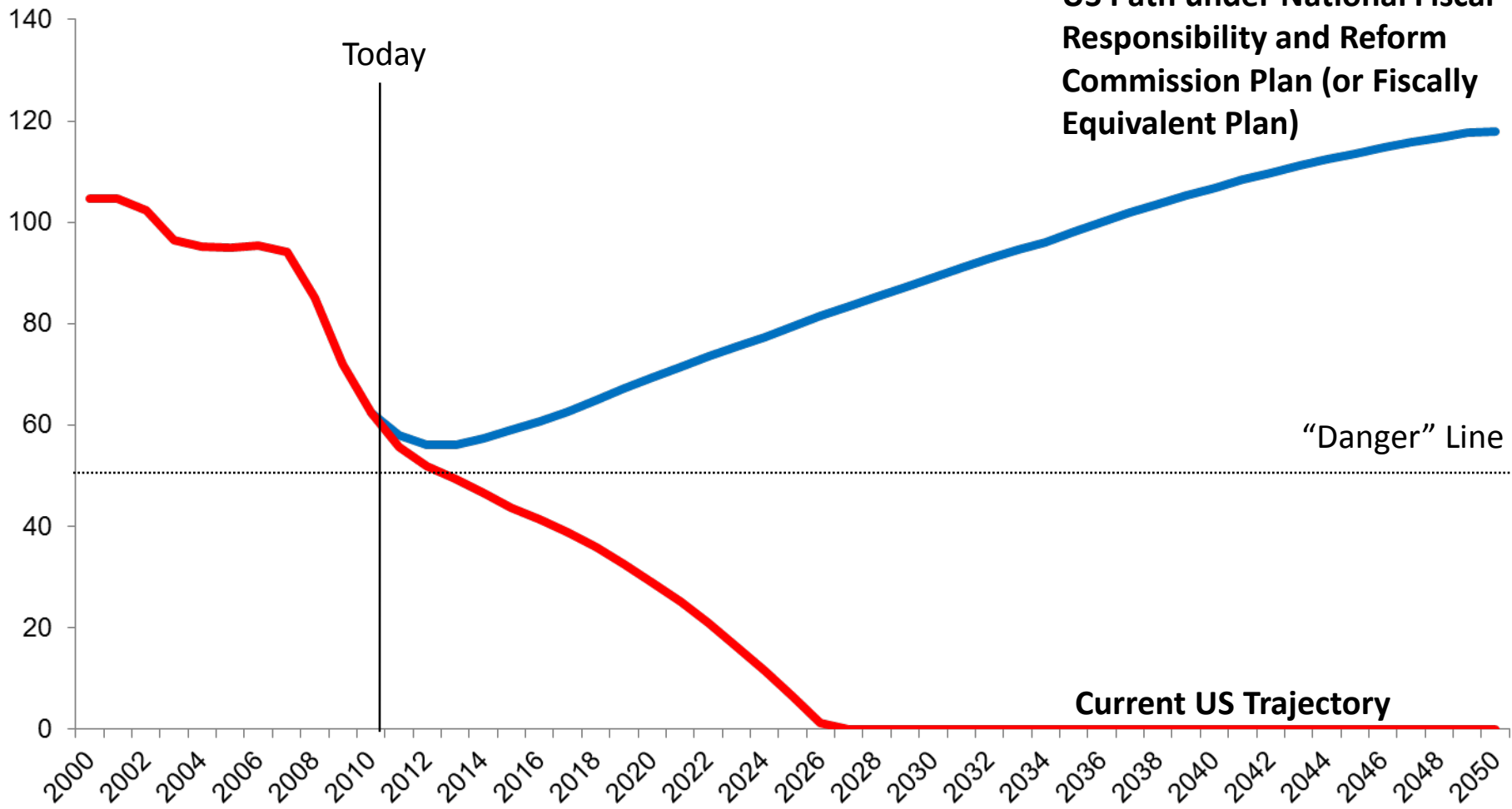
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United States Fiscal Path

United States Fiscal Space

% of Gross Domestic Product (GDP)

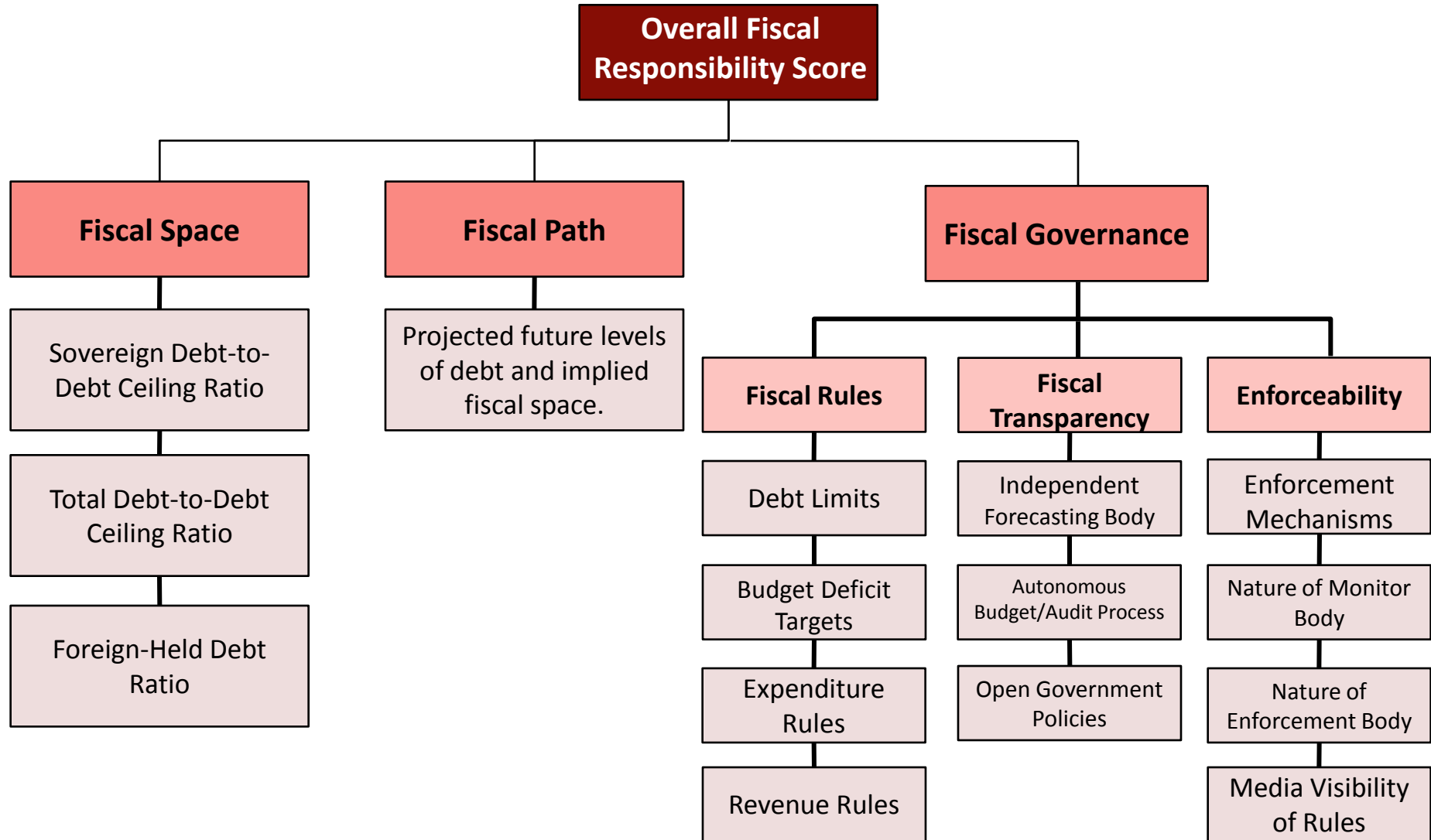


Source: IMF, OECD, country central statistics bureaus, team analysis

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The Sovereign Fiscal Responsibility Index (SFRI)

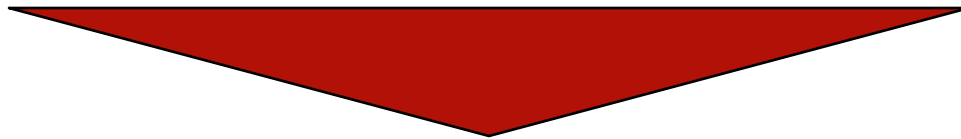


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Fiscal Space: Defining Debt

- **What constitutes sovereign debt?**
 - Gross vs. net debt?
 - Include intra-governmental debt (e.g., social security trust funds)?
 - Include subnational (state, local) debt?
 - Foreign-held debt?

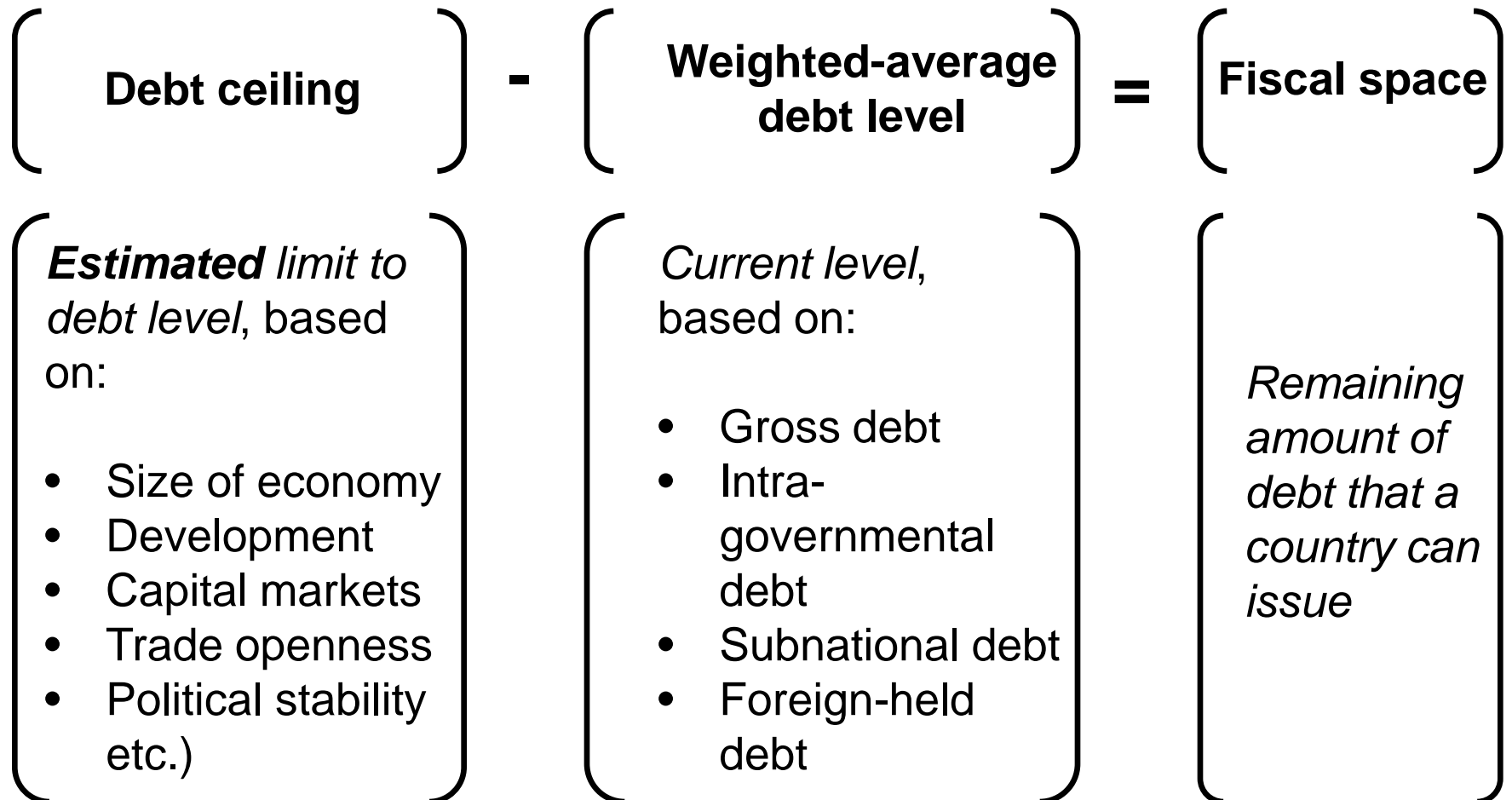


- **Our answer:**
 - Follows IMF judgment to define debt that is “apples to apples” across countries: **gross debt, include intra-governmental debt**
 - **Include subnational debt**, in separate component
 - Include **foreign-held debt** in separate component
 - Weight each 3 components equally

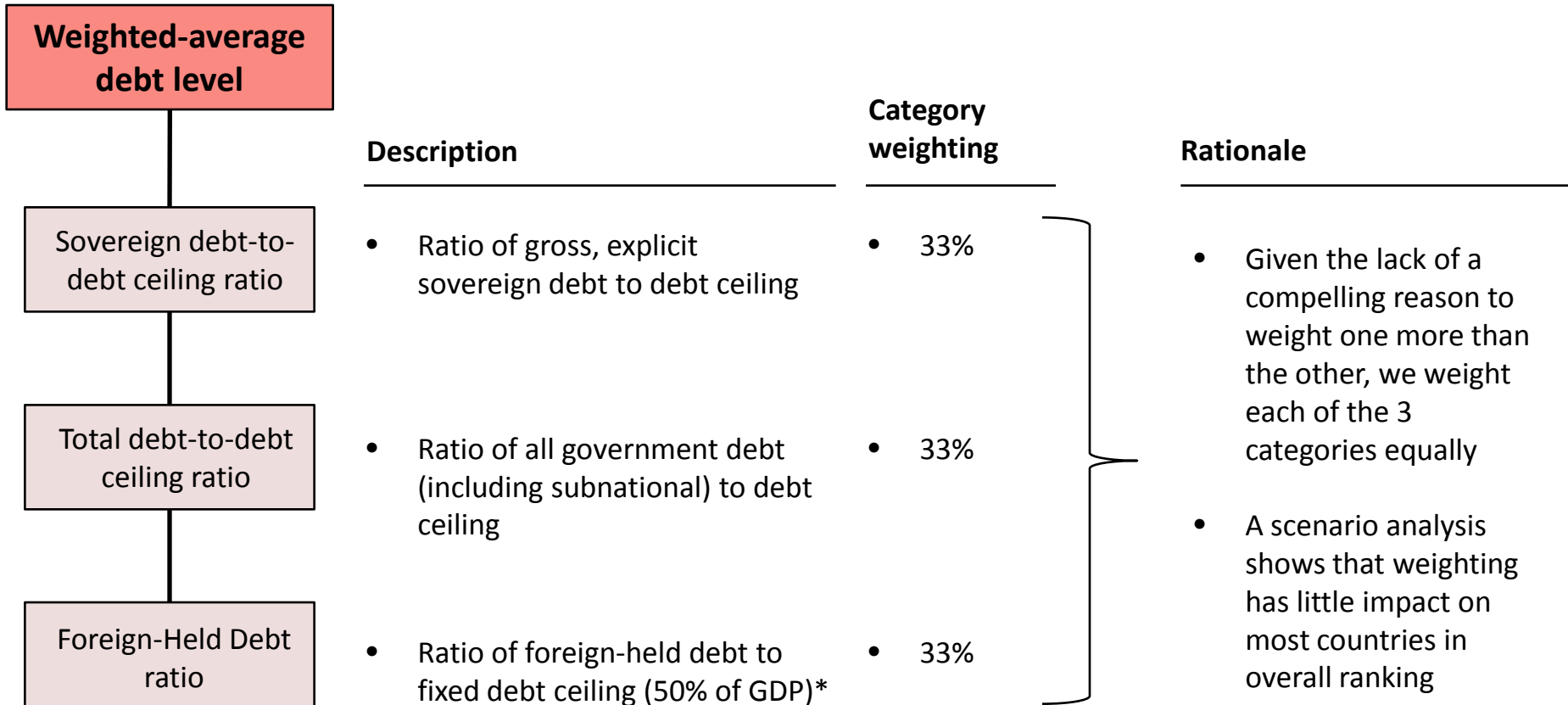
Fiscal Space: Debt ceiling and Space

How much debt is too much?

- Not all countries are created equal (size, development)
- IMF “debt ceiling” estimates limit for each country



Methodology: Weighted-Average Debt Level



* Based on team analysis. While the total debt ceiling varies by country, the debt ceiling for foreign-held debt is fixed at 50% of GDP. Reinhart and Rogoff (2009) suggest

Fiscal Space: Weightings and Example

$$\text{Weighted-average debt level} = 33\% \left(\frac{\text{Sovereign debt}}{\text{Debt ceiling}} \right) + 33\% \left(\frac{\text{All government debt}}{\text{Debt ceiling}} \right) + 33\% \left(\frac{\text{Foreign-held debt}}{\text{Fixed debt ceiling}} \right)$$

United States (2010)

- Sovereign debt: 92.7% of GDP
- Subnational debt: 19.7% of GDP
- Foreign-held debt: 27.8% of GDP
- Debt Ceiling: 160.5% of GDP
- Fixed Debt Ceiling: 50% of GDP

$$33\% \left(\frac{92.7\% \text{ of GDP}}{160.5\% \text{ of GDP}} \right) + 33\% \left(\frac{112.4\% \text{ of GDP}}{160.5\% \text{ of GDP}} \right) + 33\% \left(\frac{27.8\% \text{ of GDP}}{50\% \text{ of GDP}} \right) = 61.1\%$$

$$\left(160.5\% \text{ of GDP} \right) * \left(100\% - 61.1\% \right) = 63.4\% \text{ of GDP}$$

Fiscal Path: Calculation

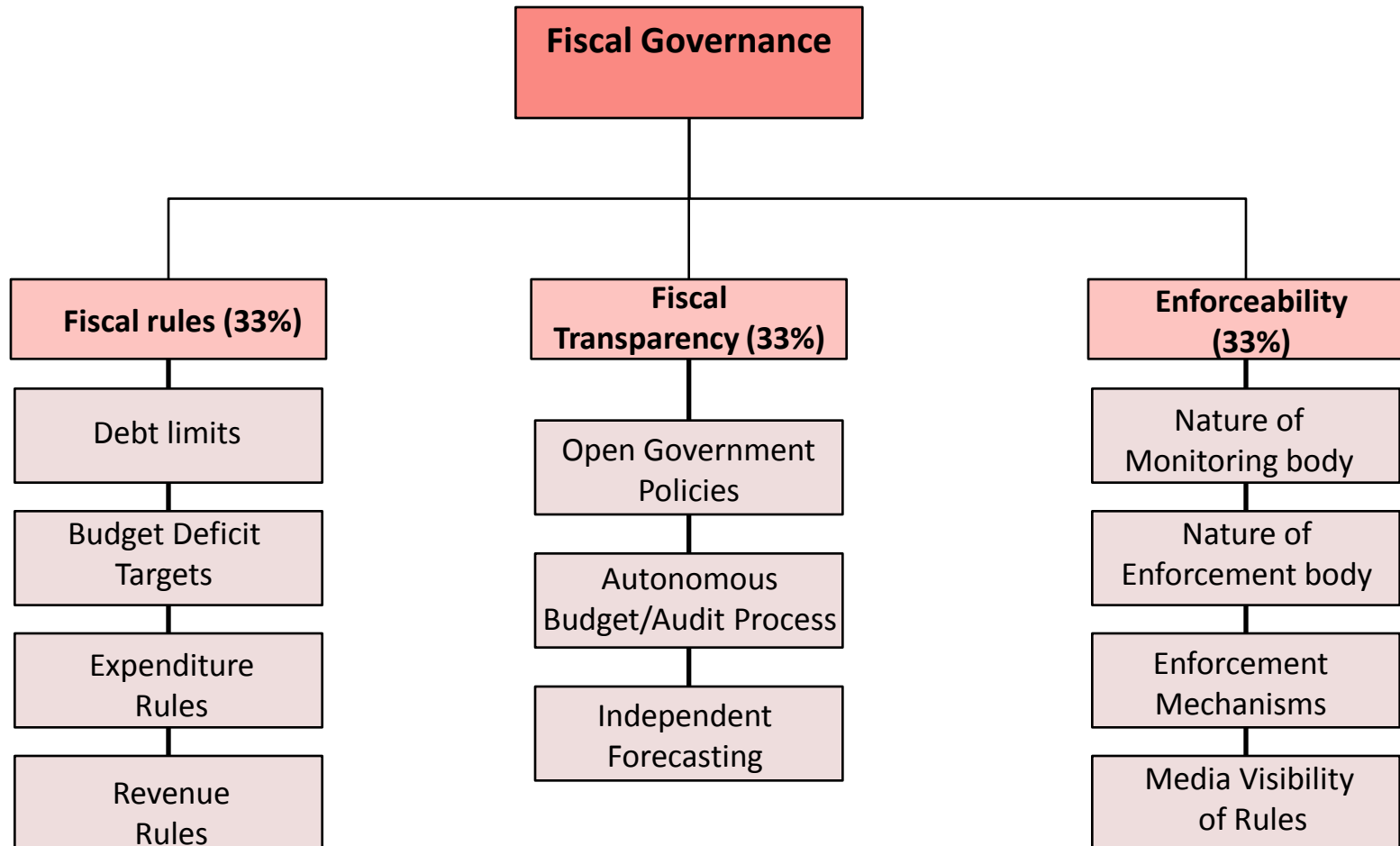
Fiscal path: Projected future levels of fiscal space (debt levels) until 2050

- Estimates number of years until fiscal space runs out
- Takes current fiscal space and projects government deficits using IMF Fiscal Monitor data:
 - Government primary balances, pension spending healthcare spending, GDP growth, interest rates

Belgium

$$\left(\begin{array}{l} \text{Debt ceiling} \\ \mathbf{168.4\% \text{ of GDP}} \end{array} \right) - \left(\begin{array}{l} \text{Weighted-average} \\ \text{debt level (2010)} \\ \mathbf{119.6\% \text{ of GDP}} \end{array} \right) = \text{Fiscal space in 2010:} \\ \mathbf{48.8\% \text{ of GDP}}$$
$$\left(\begin{array}{l} \text{Fiscal space in} \\ \text{2010:} \\ \mathbf{48.8\% \text{ of GDP}} \end{array} \right) - \left(\begin{array}{l} \text{Government} \\ \text{deficit (2011):} \\ \mathbf{3.5\% \text{ of GDP}} \end{array} \right) = \text{Fiscal space in 2011:} \\ \mathbf{45.3\% \text{ of GDP}}$$

Fiscal Governance: Framework



Fiscal Governance: Methodology for Fiscal Rules

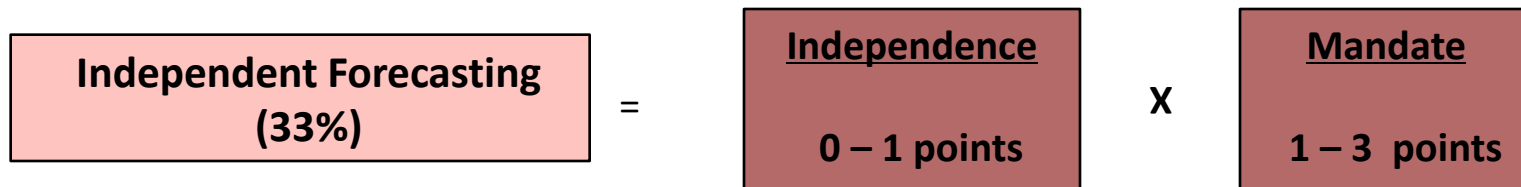
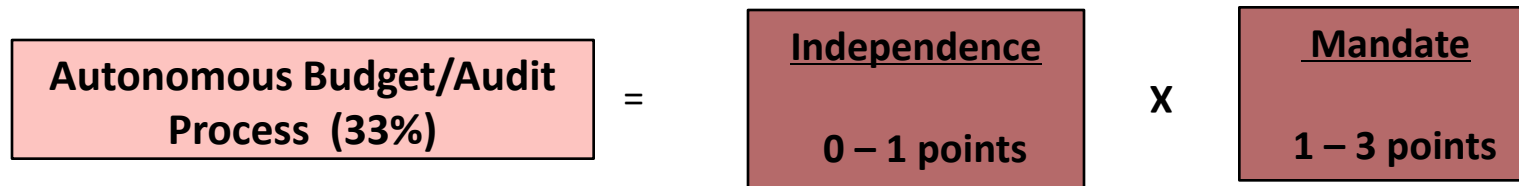
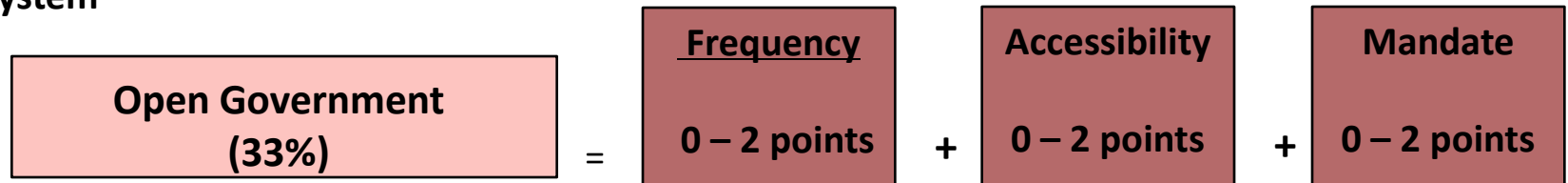
Point system	Decreasing effectiveness →			
	Legal statute (pts)			
Type of rule (pts)	Constitutional (4)	Statutory (3)	Coalition (2)	Political (1)
Debt limit (3)	• 12	• 9	• 6	• 3
Budget deficit target (2)	• 8	• 6	• 4	• 2
Spending rule (1)	• 4	• 3	• 2	• 1
Revenue rule (1)	• 4	• 3	• 2	• 1

Points added for relevant categories and normalized out of 100

E.g., Germany:
 Coalition debt limit, constitutional budget target, and political expenditure rule:
 Fiscal Rules Score = 6 + 8 + 1 = 15
Normalize out of 100: $(15/28) \times 100 = 53.6$

Fiscal Governance: Methodology for Fiscal Transparency

Point system



E.g., Belgium

Predetermined frequency of publishing, easily accessible online, legal mandate to publish

Open govt score = 2 + 2 + 2 = 6

Constitutional 'Court of Audit' commissioned as an external control body

Autonomous Budget/Audit score = 1 * 3 = 3

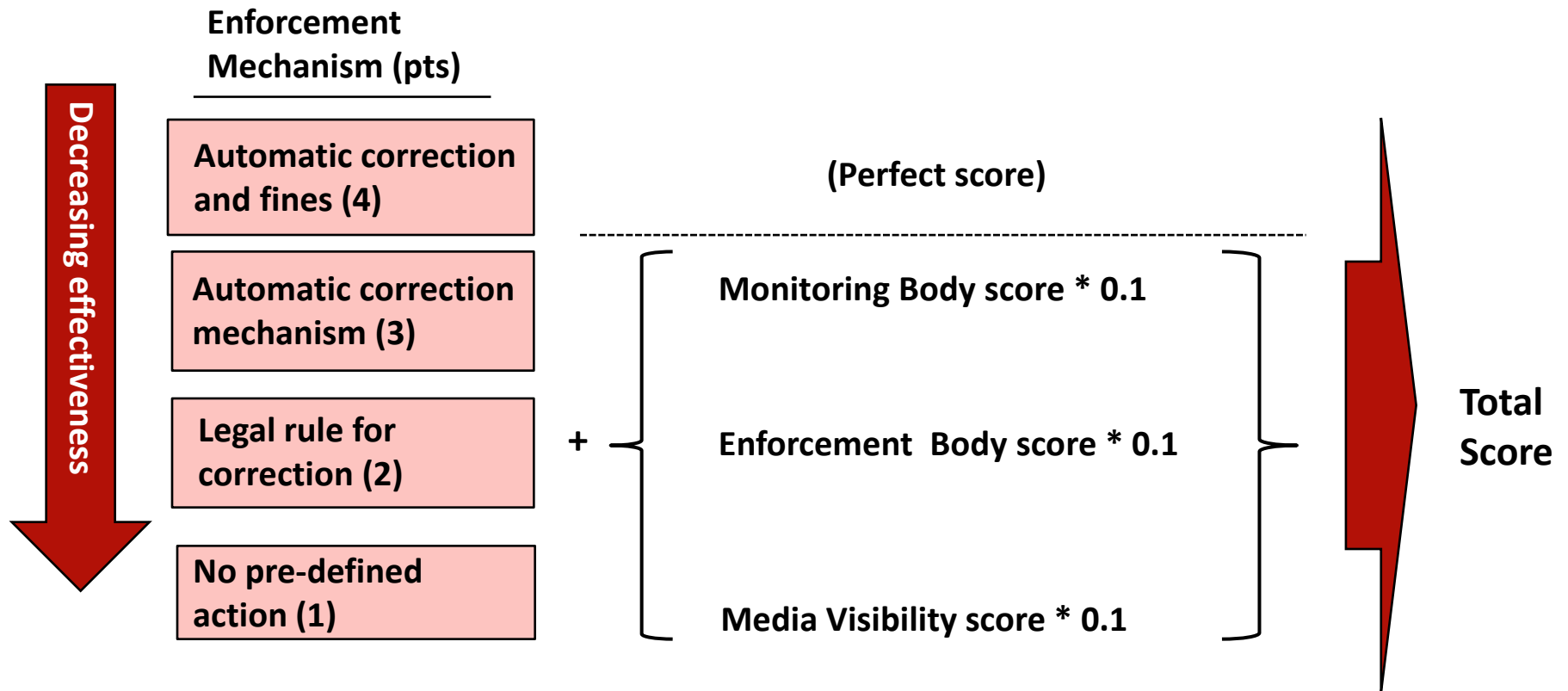
Collaboration of three independent institutions for statistical analysis and economic forecasting

Independent forecasting = 1 * 1 = 1

Total = 6+3+1 = 9. Normalized score = 77/100

Fiscal Governance: Methodology for Enforceability

Point system



E.g., Austria:

BBR has automatic correction and possibility of sanctions.

Fiscal Enforceability Score = 4

Normalize out of 100: $(4/4) \times 100 = 100$

E.g., Chile:

GOV proposes corrective measures, 3 point for enforcement mechanism.

Fiscal Enforceability Score = $2 + 3 \times 0.1 + 3 \times 0.1 + 2 \times 0.1 = 2.8$

Normalize out of 100: $(2.8/4) \times 100 = 70$