

Assessing the Sustainability of Public Debts

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Seminar:

Financial Markets and the Evolution of Sovereign Debt
Markets—Key Economic and Legal Issues

Universidade de Lisboa

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Overview

- **Debt sustainability analysis (DSA): Why?**
- **The IMF's (new) DSA framework**
- **DSA in practice: Portugal's case**
- **Final thoughts**

Why DSA?



SIPRESS

"How am I supposed to think about consequences before they happen?"

Why DSA?

Public debt sustainable if:

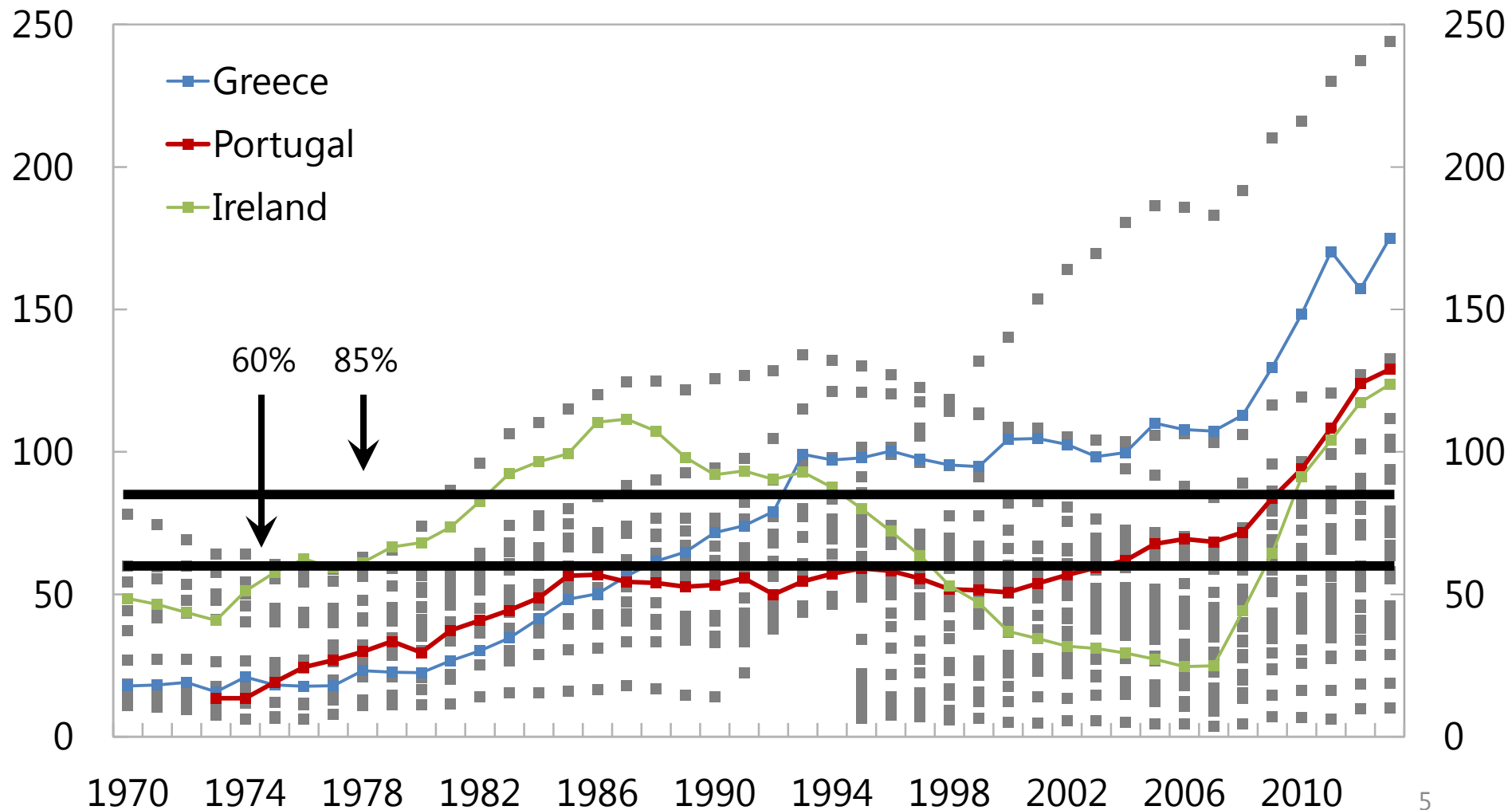
- Primary fiscal balance path that stabilizes debt under baseline and realistic shock scenarios is economically and politically feasible
- Level of debt is consistent with acceptable rollover risks
- Level of debt is consistent with satisfactory potential growth

If public debt is not sustainable:

- Debt restructuring or rescheduling

Why DSA? Advanced economies: Gross public debt, 1970-2013

(Percent of GDP)



Why DSA? A short history

- **Keynes, J.M. (1923)**, “claims of the bond-holders are more than the tax payer can support” (p. 55)
- **Blanchard, O., et.al. (1990)**, developed a set of forward-looking DSA indicators
- **Maastricht Treaty (1992)**, 60 % public debt criterion
- **IMF, 2002**, standardized DSA template for market access countries (MACs)
- **IMF, 2013**, revised DSA template for MACs (separate DSA for lower-income countries)

Risk-based DSA: Market access countries

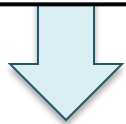
Does current/projected **public debt exceed 60 percent of GDP?**

or

Do current/projected **public gross financing needs exceed 15 percent of GDP?**

or

Is the country seeking or does it currently have **exceptional access** to Fund resources?



If none of the above

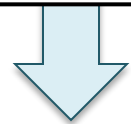
Country is classified as
Lower Scrutiny
and is required to include:

Basic DSA:

- baseline scenario
- alternative scenarios

and where relevant:

contingent liabilities and customized scenarios



If any of the above

Country is classified as
Higher Scrutiny
and is required to include:

1. Basic DSA:

- baseline scenario
- alternative scenarios

2. Risk Identification and Analysis:

- realism of baseline scenario
- vulnerability of debt profile
- sensitivity to macro-fiscal risks
- contingent liabilities

3. Risk Reporting:

- heat map
- fan charts

Portugal: DSA checklist

1. Basic DSA

- Baseline scenario
- Composition of public debt
- Alternative scenarios

2. Higher scrutiny DSA framework

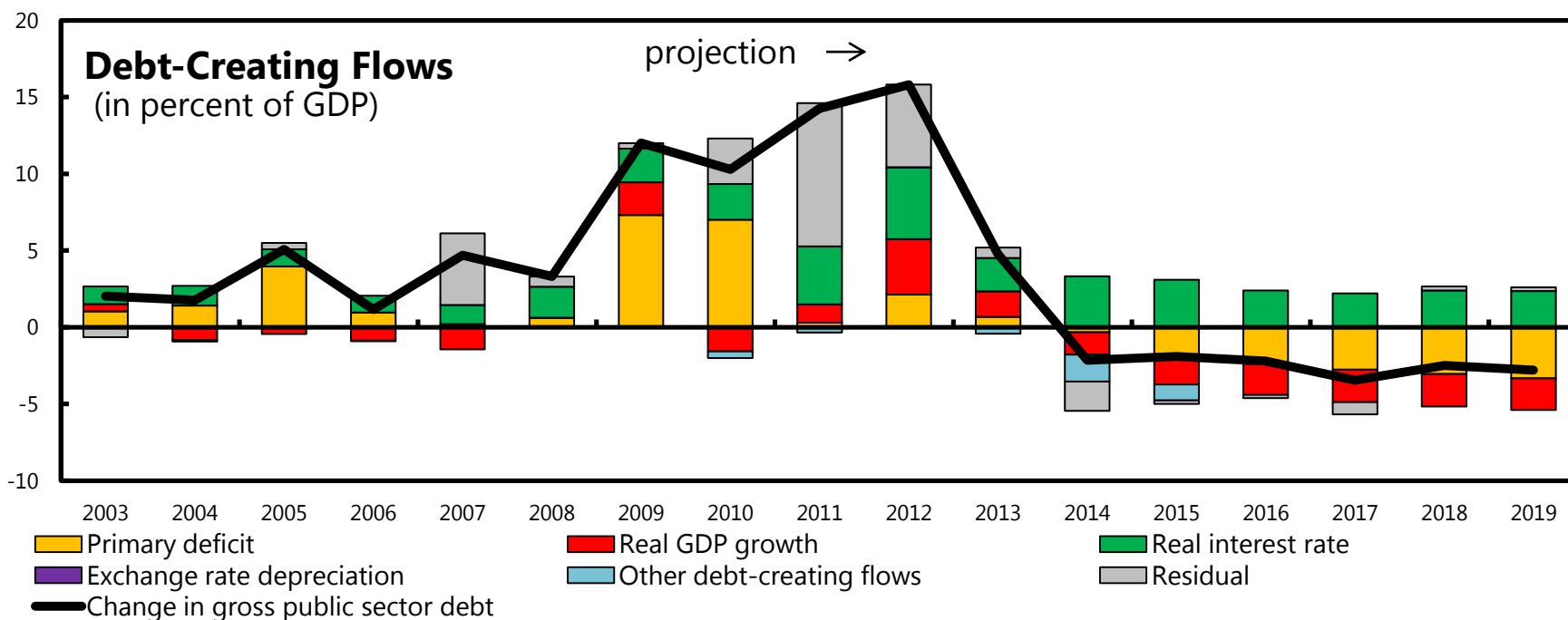
- Realism of macro forecasts
- Realism of fiscal adjustment
- Debt profile vulnerabilities
- Sensitivity to macro-fiscal risks

3. Risk reporting

- Heat map
- Fan charts

Portugal: DSA baseline scenario*

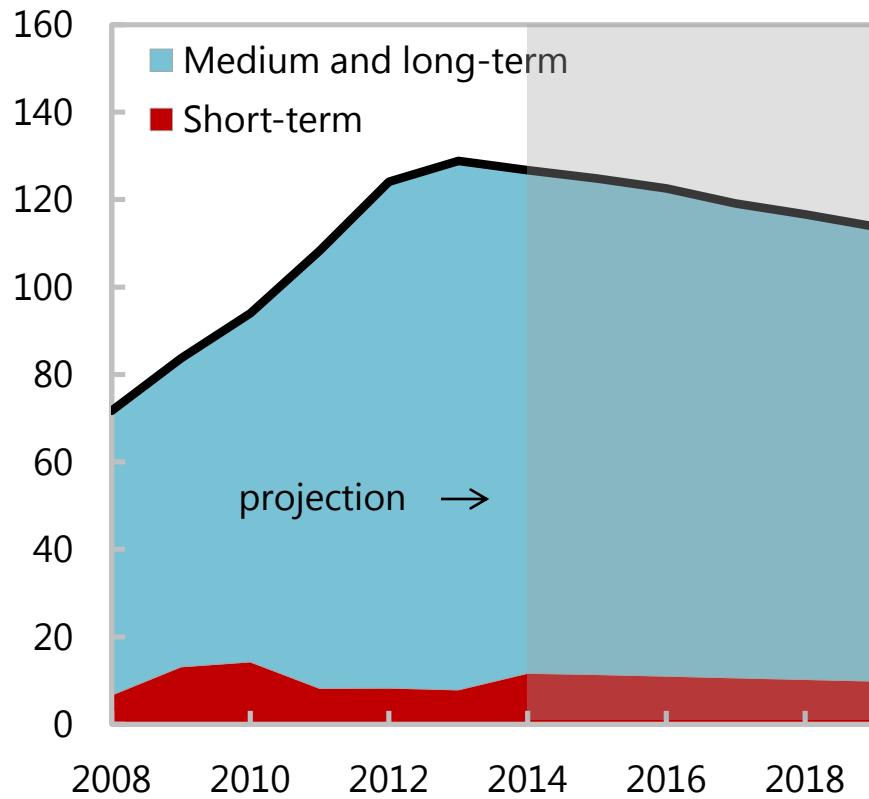
	Actual		Prel.	Projections					
	2003-2011	2012	2013	2014	2015	2016	2017	2018	2019
Nominal gross public debt	73.9	124.1	128.8	126.7	124.8	122.6	119.1	116.6	113.9
Public gross financing needs	...	29.1	24.1	19.4	21.5	20.4	20.9	20.7	19.4
Real GDP growth (in percent)	0.3	-3.2	-1.4	1.2	1.5	1.7	1.8	1.8	1.8
Inflation (GDP deflator, in percent)	1.9	-0.3	1.7	0.8	1.0	1.7	1.8	1.8	1.8
Nominal GDP growth (in percent)	2.2	-3.5	0.3	2.0	2.5	3.4	3.6	3.7	3.7
Effective interest rate (in percent)	4.5	3.9	3.4	3.4	3.6	3.7	3.7	3.9	3.9



Portugal: Composition of public debt

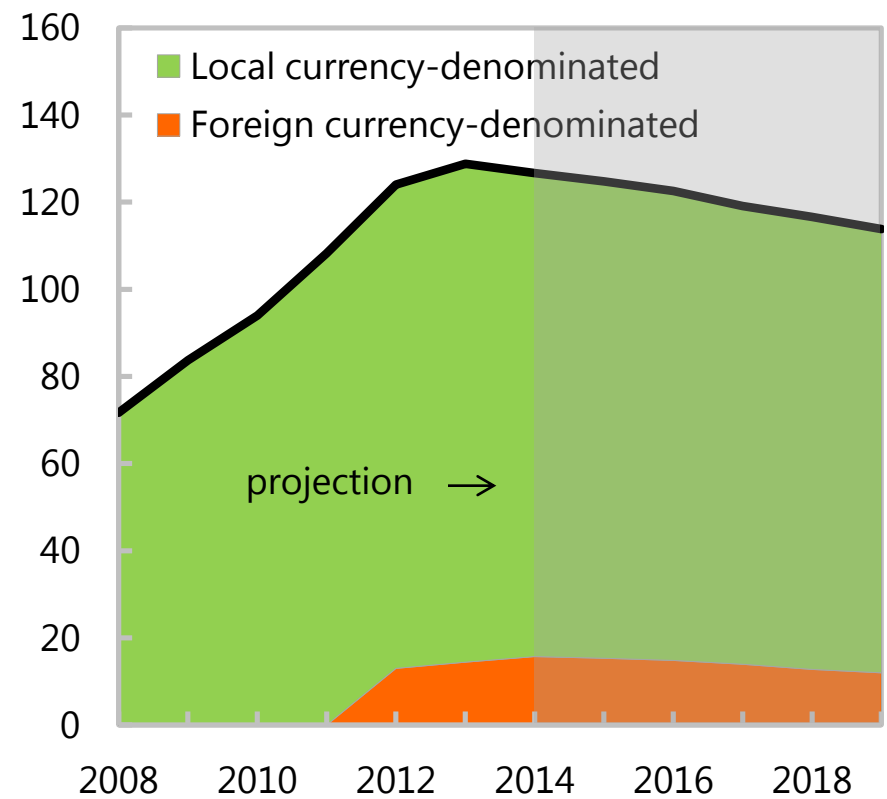
By Maturity

(in percent of GDP)

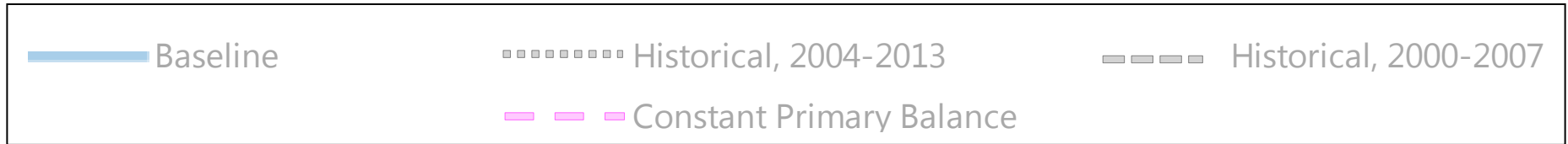


By Currency

(in percent of GDP)

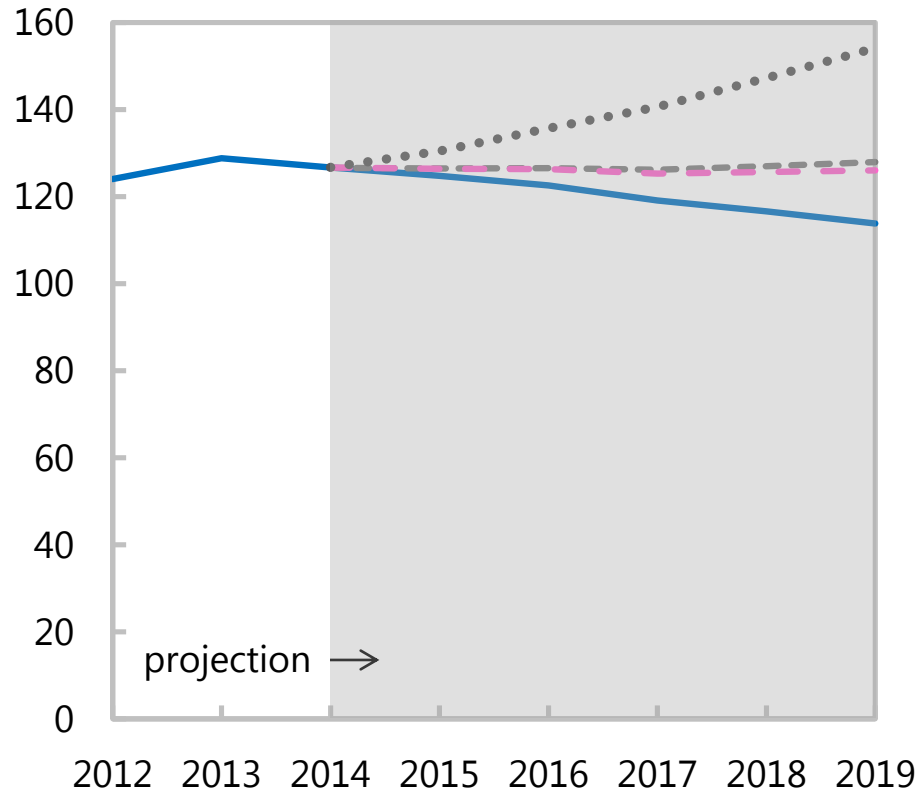


Portugal: Alternative scenarios



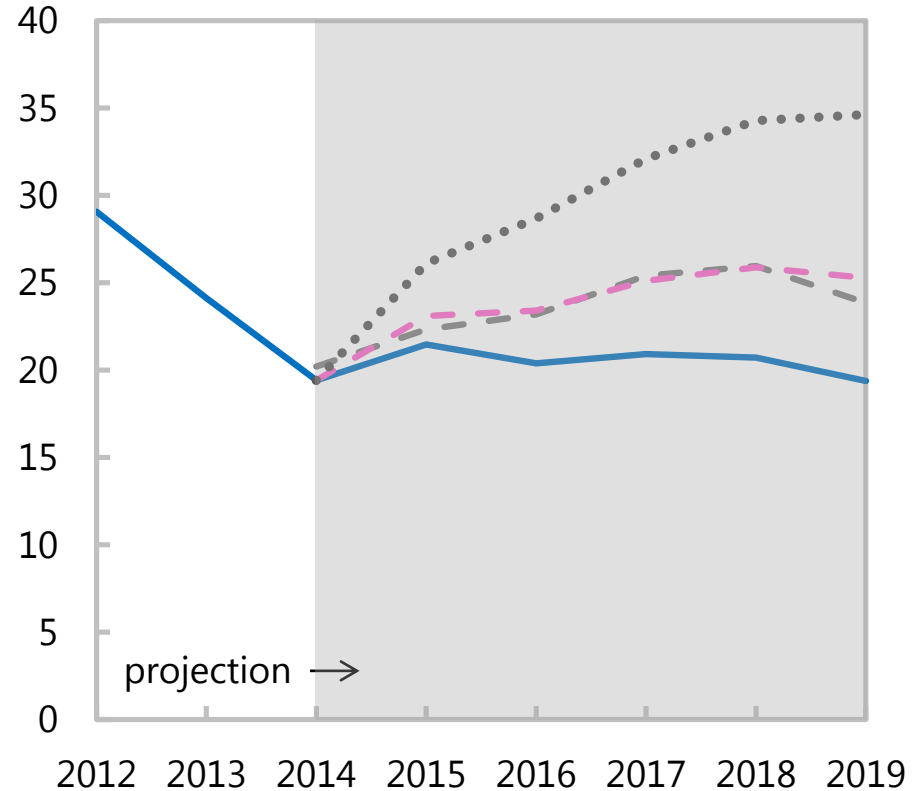
Gross Nominal Public Debt

(in percent of GDP)



Public Gross Financing Needs

(in percent of GDP)



Portugal: DSA checklist

1. Basic DSA

- Baseline scenario
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2. Higher scrutiny DSA framework

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3. Risk reporting

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Portugal: Realism of macro forecasts

Real GDP Growth

(in percent, actual-projection)

Portugal median forecast error, 2005-2013: **-2.11**

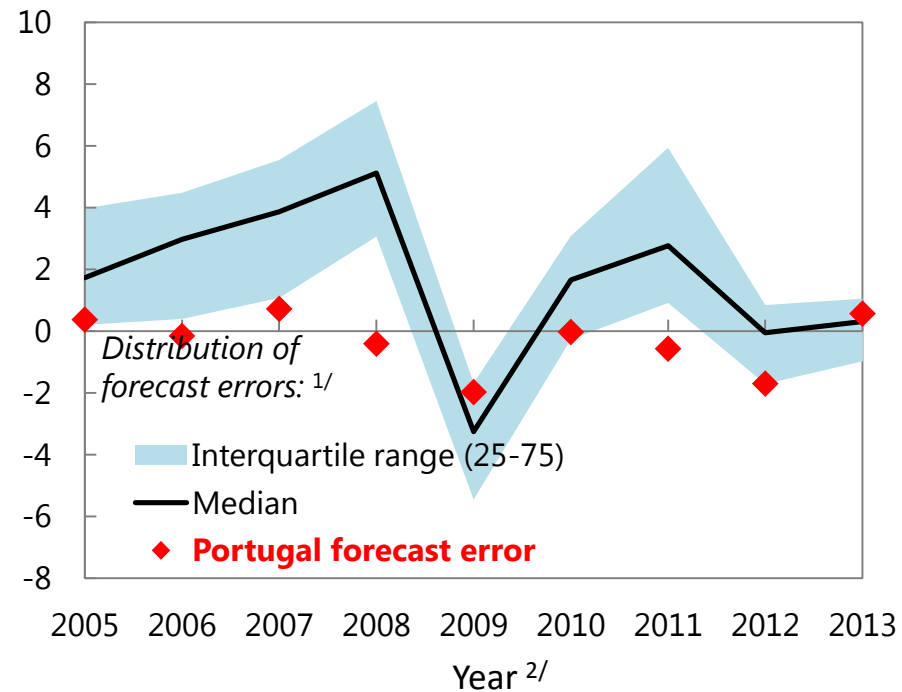
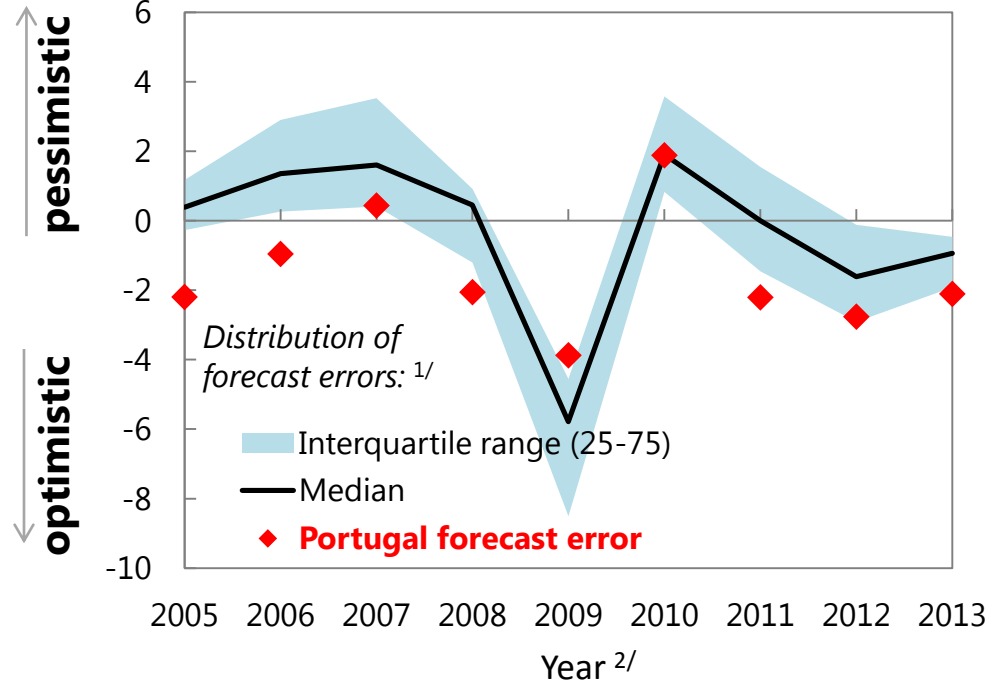
Has a percentile rank of: **3%**

Inflation (GDP deflator)

(in percent, actual-projection)

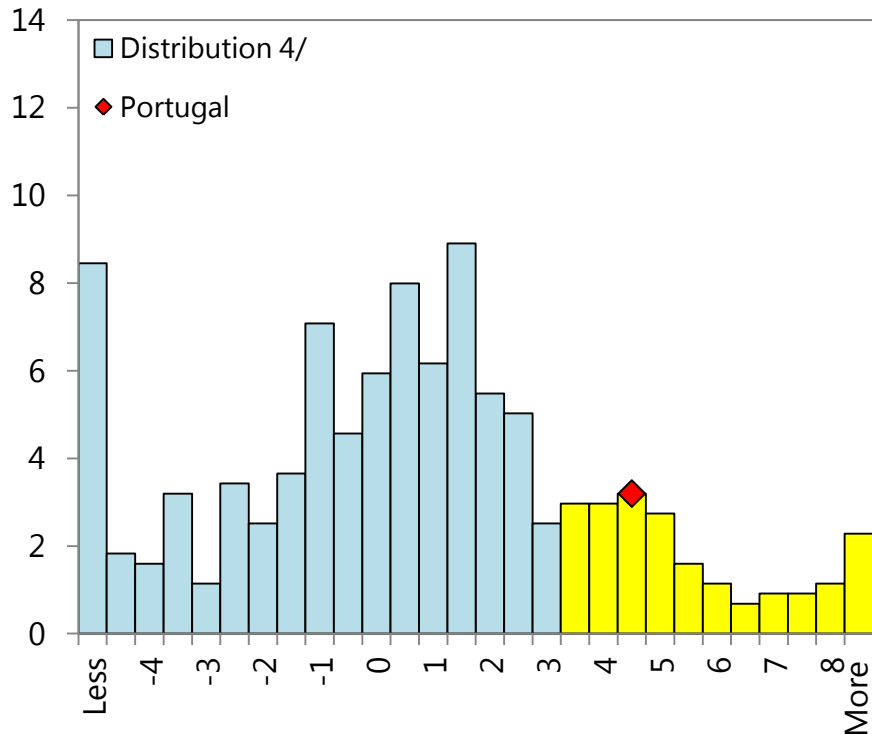
Portugal median forecast error, 2005-2013: **-0.16**

Has a percentile rank of: **18%**

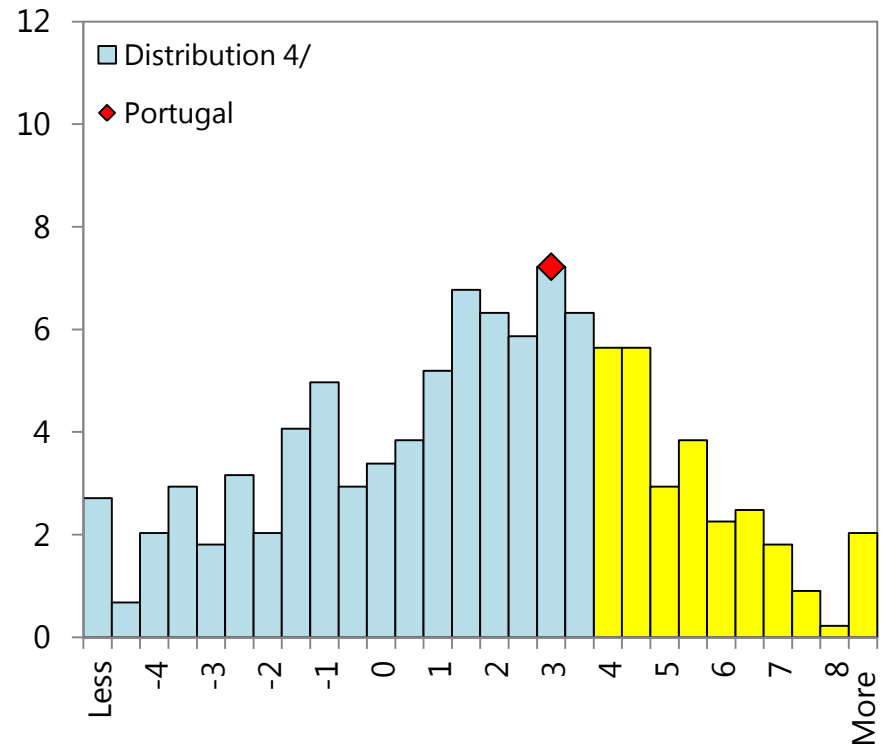


Portugal: Realism of fiscal adjustment assumptions

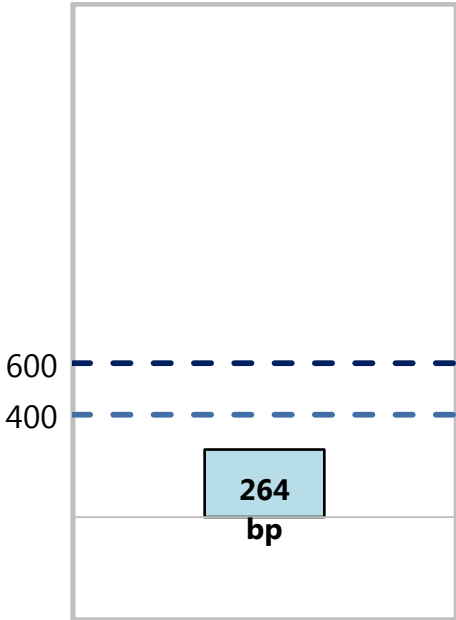
3-Year Adjustment in Cyclically-Adjusted Primary Balance (CAPB)
(Percent of GDP)



3-Year Average Level of Cyclically-Adjusted Primary Balance (CAPB)
(Percent of GDP)

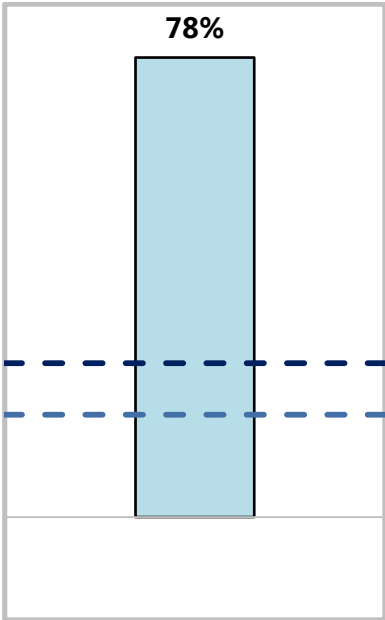


Portugal: Debt profile vulnerabilities



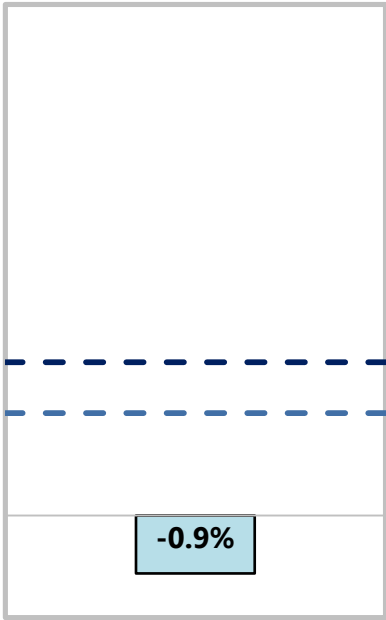
Bond Spread over German Bonds

(in basis points) 4/



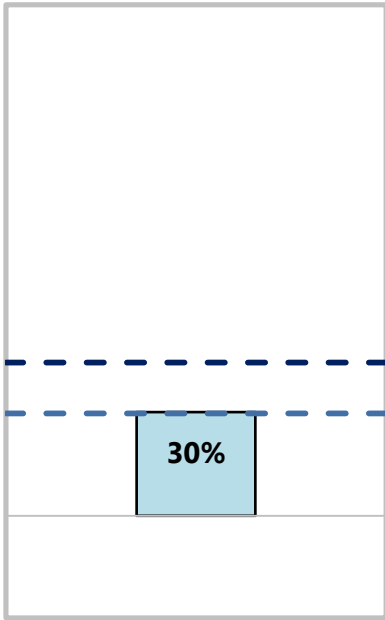
External Financing Requirement

(in percent of GDP)



Annual Change in Short-Term Public Debt

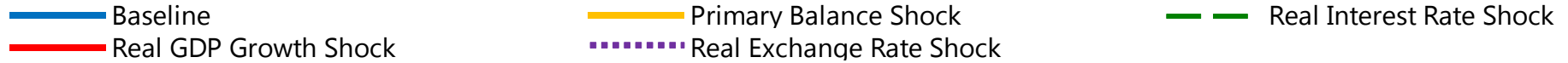
(in percent of total)



Public Debt Held by Non-Residents

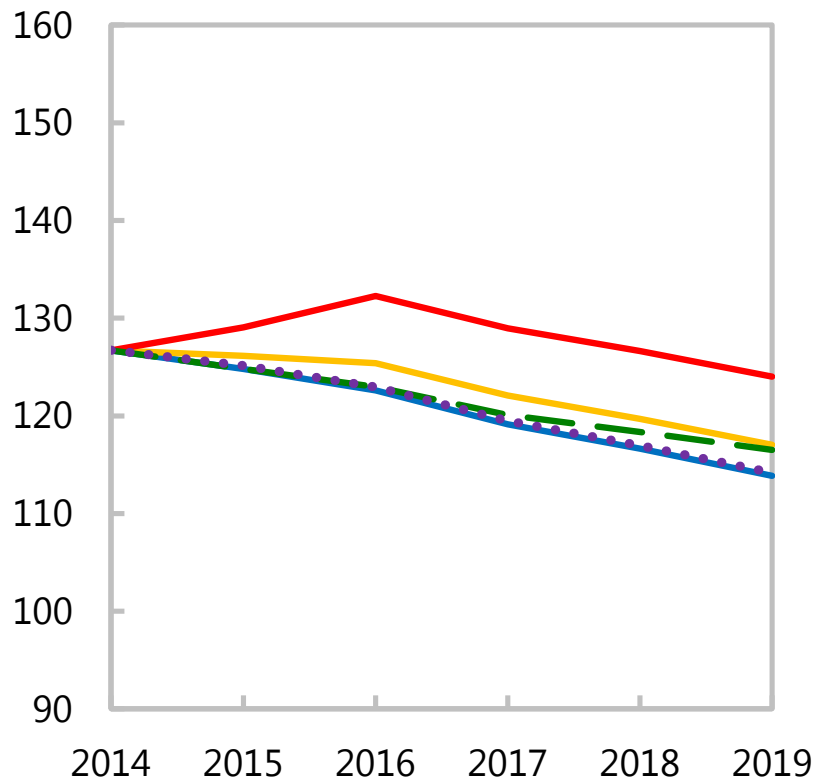
(in percent of total)

Portugal: Sensitivity to macro-fiscal risks I



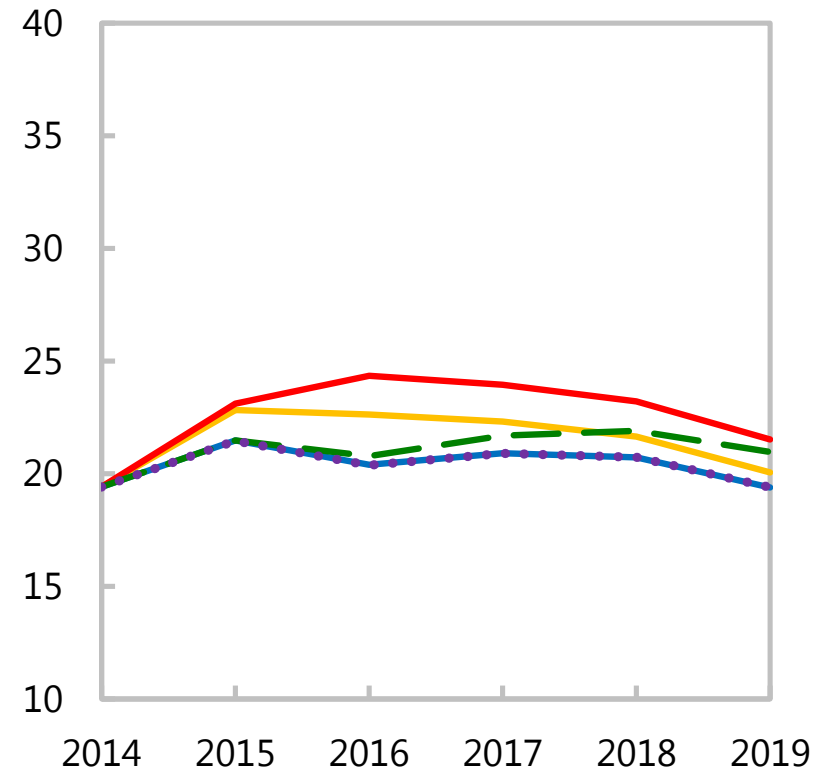
Gross Nominal Public Debt

(in percent of GDP)



Public Gross Financing Needs

(in percent of GDP)

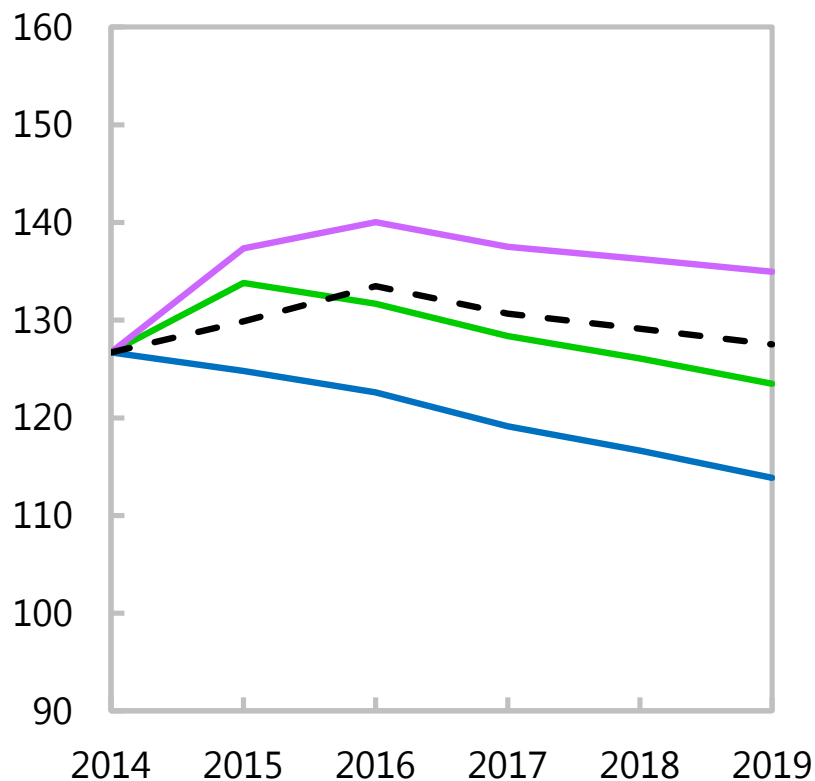


Portugal: Sensitivity to macro-fiscal risks II



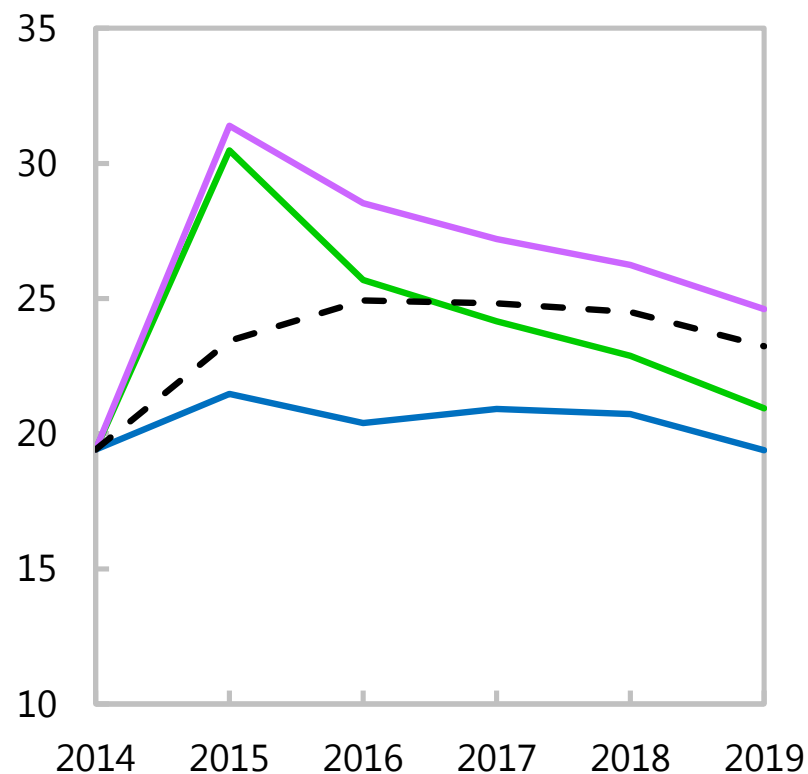
Gross Nominal Public Debt

(in percent of GDP)



Public Gross Financing Needs

(in percent of GDP)



Portugal: DSA checklist

1. Basic DSA

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- Realism of macro forecasts
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3. Risk reporting

- Heat map
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Portugal: Heat Map

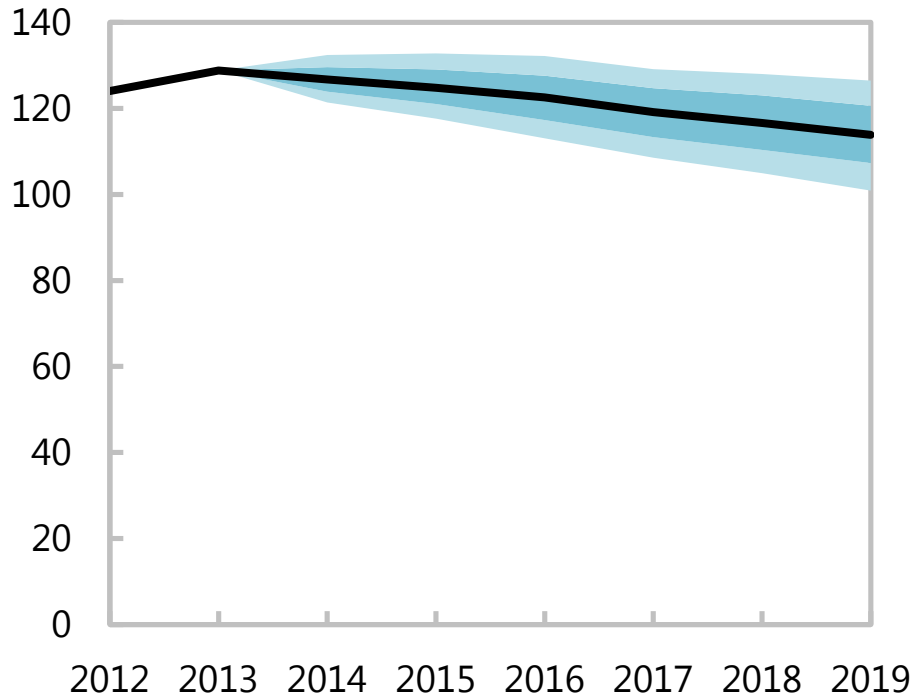
<p>Debt level (85%)</p>	<p>Real GDP Growth Shock</p>	<p>Primary Balance Shock</p>	<p>Real Interest Rate Shock</p>	<p>Exchange Rate Shock</p>	<p>Contingent Liability shock</p>
<p>Gross financing needs (20%)</p>	<p>Real GDP Growth Shock</p>	<p>Primary Balance Shock</p>	<p>Real Interest Rate Shock</p>	<p>Exchange Rate Shock</p>	<p>Contingent Liability Shock</p>
<p>Debt profile</p>	<p>Market Perception</p>	<p>External Financing Requirements</p>	<p>Change in the Share of Short-Term Debt</p>	<p>Public Debt Held by Non-Residents</p>	<p>Foreign Currency Debt</p>

Portugal: Fan Charts

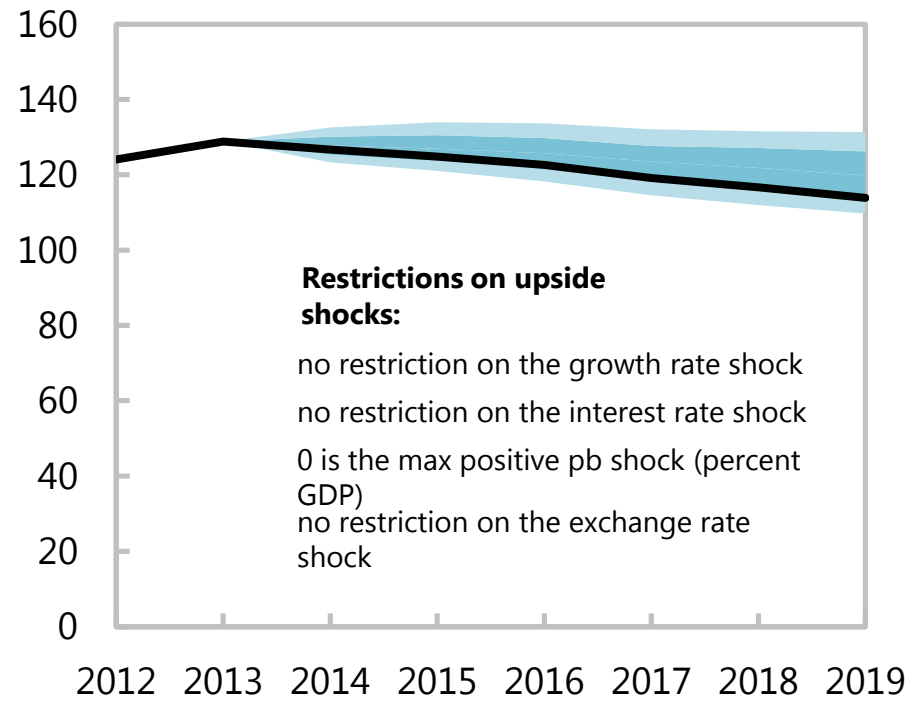
Evolution of Predictive Densities of Gross Nominal Public Debt (in percent of GDP)

— Baseline Percentiles: 10th-25th 25th-75th 75th-90th

Symmetric Distribution



Restricted (Asymmetric) Distribution



Portugal: Overall DSA Assessment

Significant risks to debt sustainability

- Debt ratio (>85 percent of GDP)
- Gross public financing needs (>20 percent of GDP)
- High sensitivity to adverse growth shocks
- High contingent liability risks (SOEs, PPPs, guarantees)

Debt profile subject to medium to low risks

Final thoughts

