



EU INDEPENDENT FISCAL INSTITUTIONS

ROLE OF IFIS IN ASSESSING THE SUSTAINABILITY OF
HIGH PUBLIC DEBT IN THE POST-COVID ERA

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EFB THIRD ANNUAL CONFERENCE

This paper was prepared by an ad-hoc working group of the Network of the EU Independent Fiscal Institutions under the coordination of Esther Gordo (Independent Authority for Fiscal Responsibility, Spain) and Eddie Casey (Irish Fiscal Advisory Council).

The group included the Independent Authority for Fiscal Responsibility (Spain), the Irish Fiscal Advisory Council (Ireland), the Fiscal Council of Bulgaria (Bulgaria), the Council of Public Finances (Portugal) and the Secretariat of the Network of EU IFIs.

This paper has been reviewed by the EU IFIs Network. The analysis and views expressed do not necessarily represent the positions of individual members of the Network.

1) Context

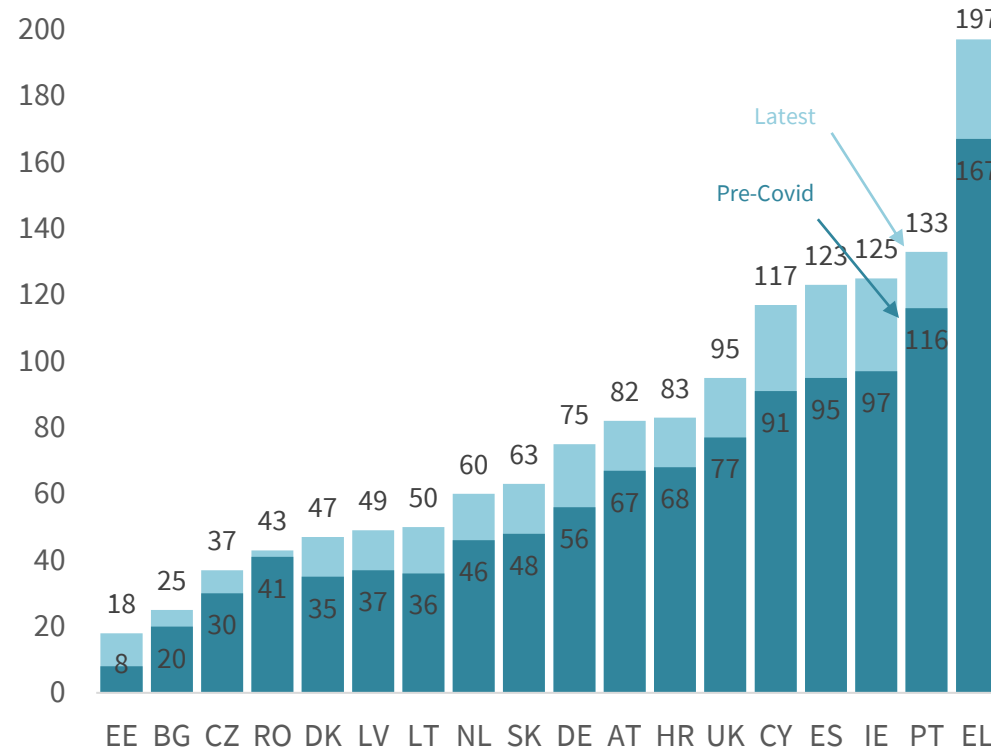
2) Role of IFIs

3) Reflections & Insights

Widespread debt increases; some worse than others

Projected government debt ratios in 2020

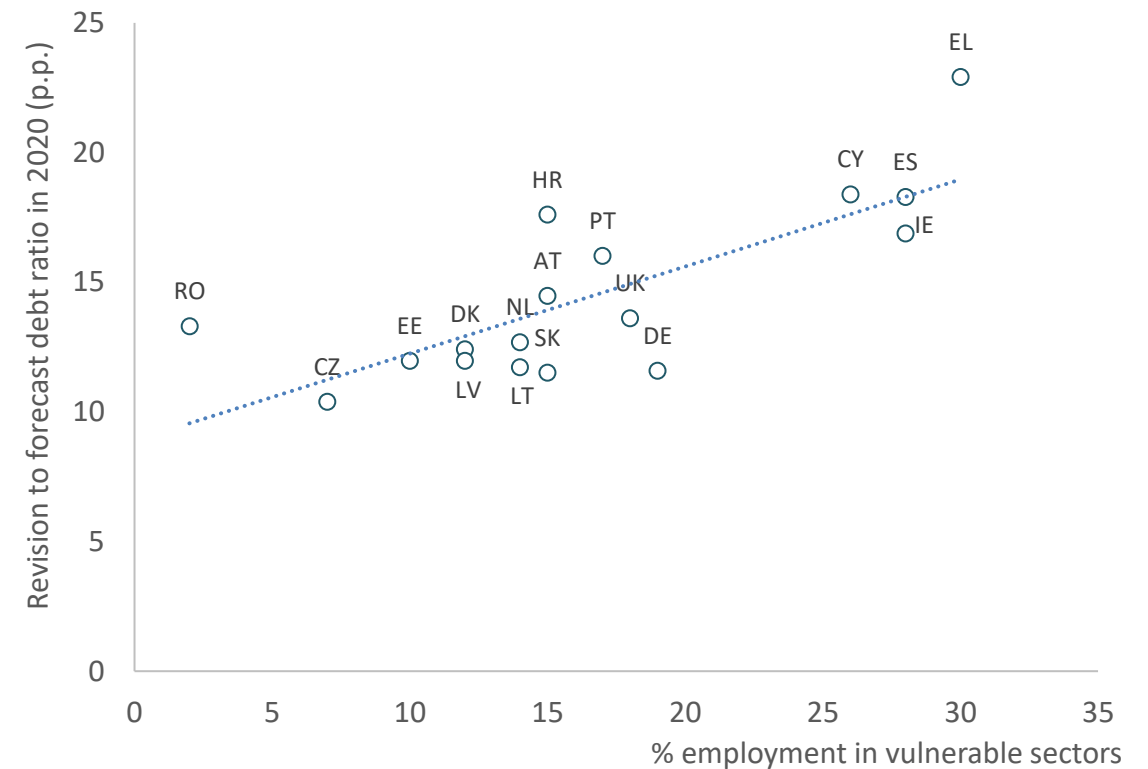
(% of GDP)



Note: % of GNI for Ireland

Source: European Fiscal Monitor, September 2020.

Debt ratios and vulnerable employment



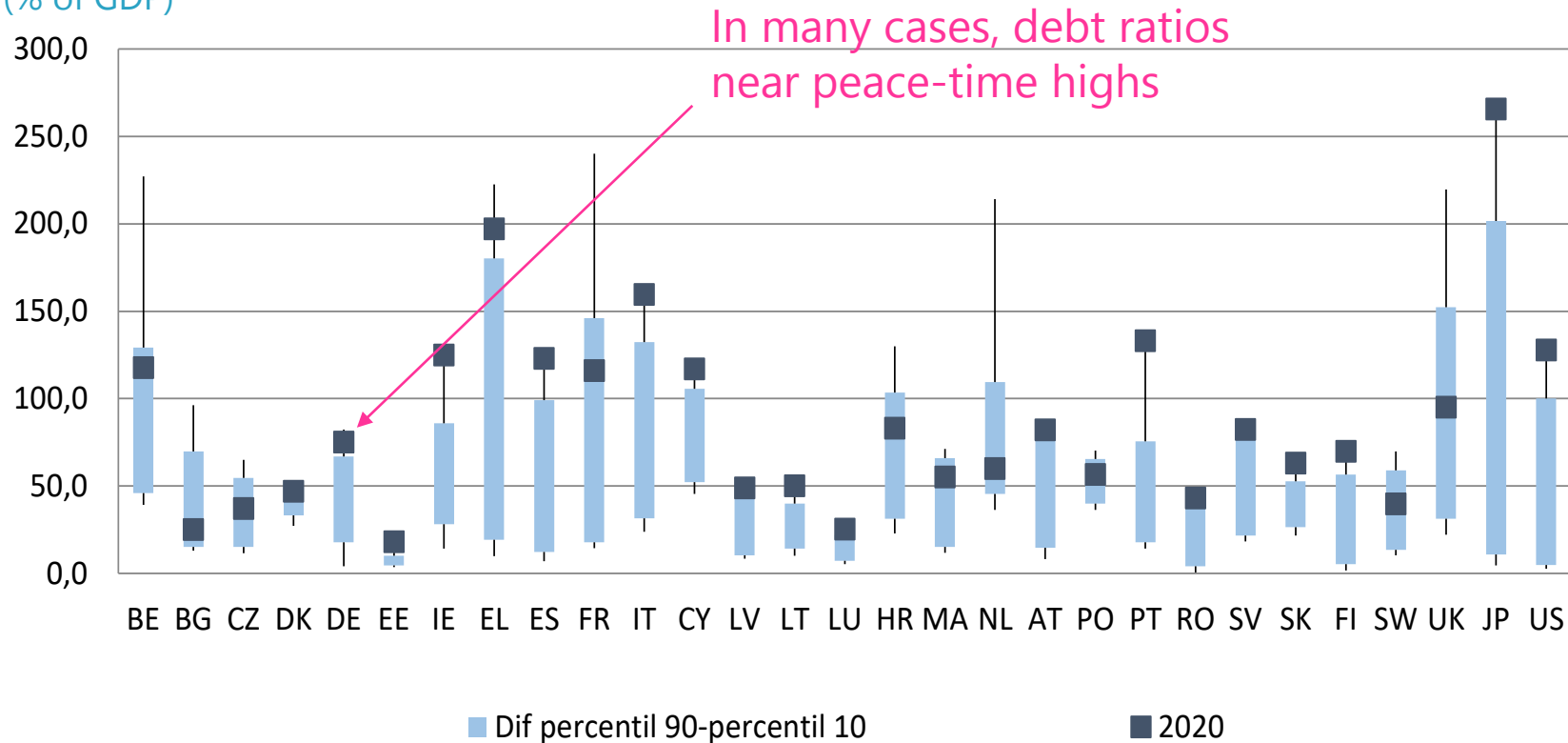
Note: Employment in "vulnerable sectors" refers to accommodation, food and beverage services and retail sectors.

Sources: Eurostat Q4 2019 data; and European Fiscal Monitor, September 2020.

Likely to result in historically high ratios

Government debt ratios 1900 - 2020

(% of GDP)

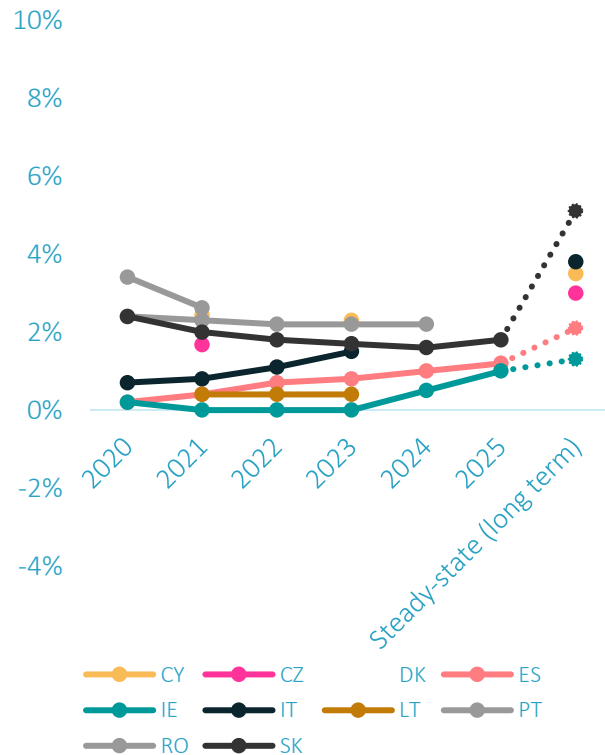


Note: % of GNI for Ireland for better comparability

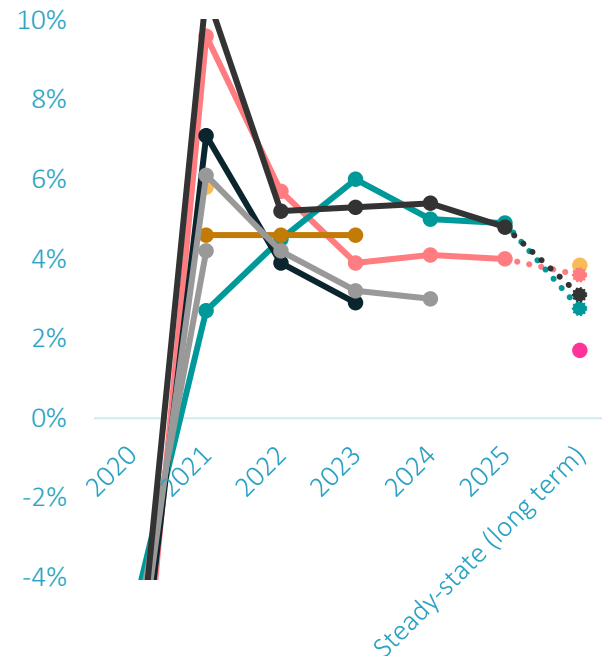
Source: Historical Debt Database (IMF), European Fiscal Monitor, September 2020 and European Commission AMECO Database.

Assumptions in recent Debt Sustainability Assessments

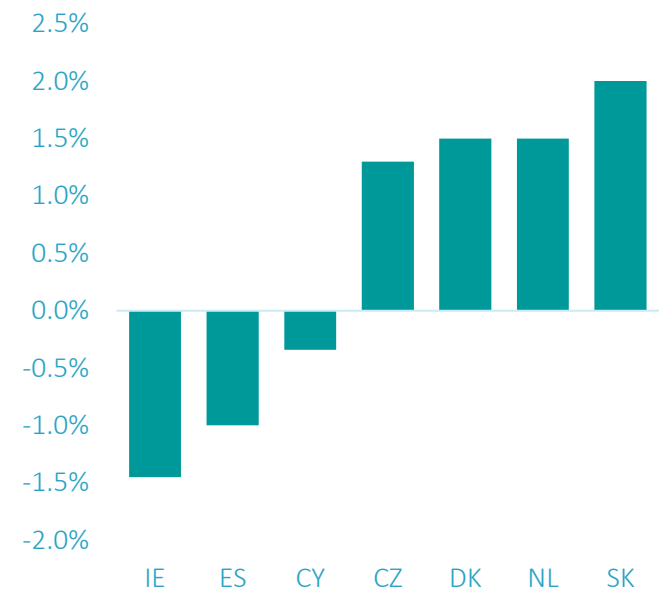
Nominal marginal interest rates (i)



Nominal output growth rates (g)



Steady state/long-run interest-growth rate differentials assumed (i-g)



Notes: The timing of steady state/long-run values assumed differed by respondent. For IE, this refers to 2050; for ES, there is no such steady state estimate but from 2027 to 2050, there is a range of variation of ± 0.5 points from $i-g$ of -1% ; for CY, this refers to 2033; for CZ, this refers to 2030; for DK, this refers to 2050; for NL, this refers to 2060; for SK, this refers to 2070.
Source: Network of EU IFIs (2020)

Heightened sensitivity

Despite low interest rates, high debt ratios mean greater sensitivity to changes in interest rates and shortfalls in growth:

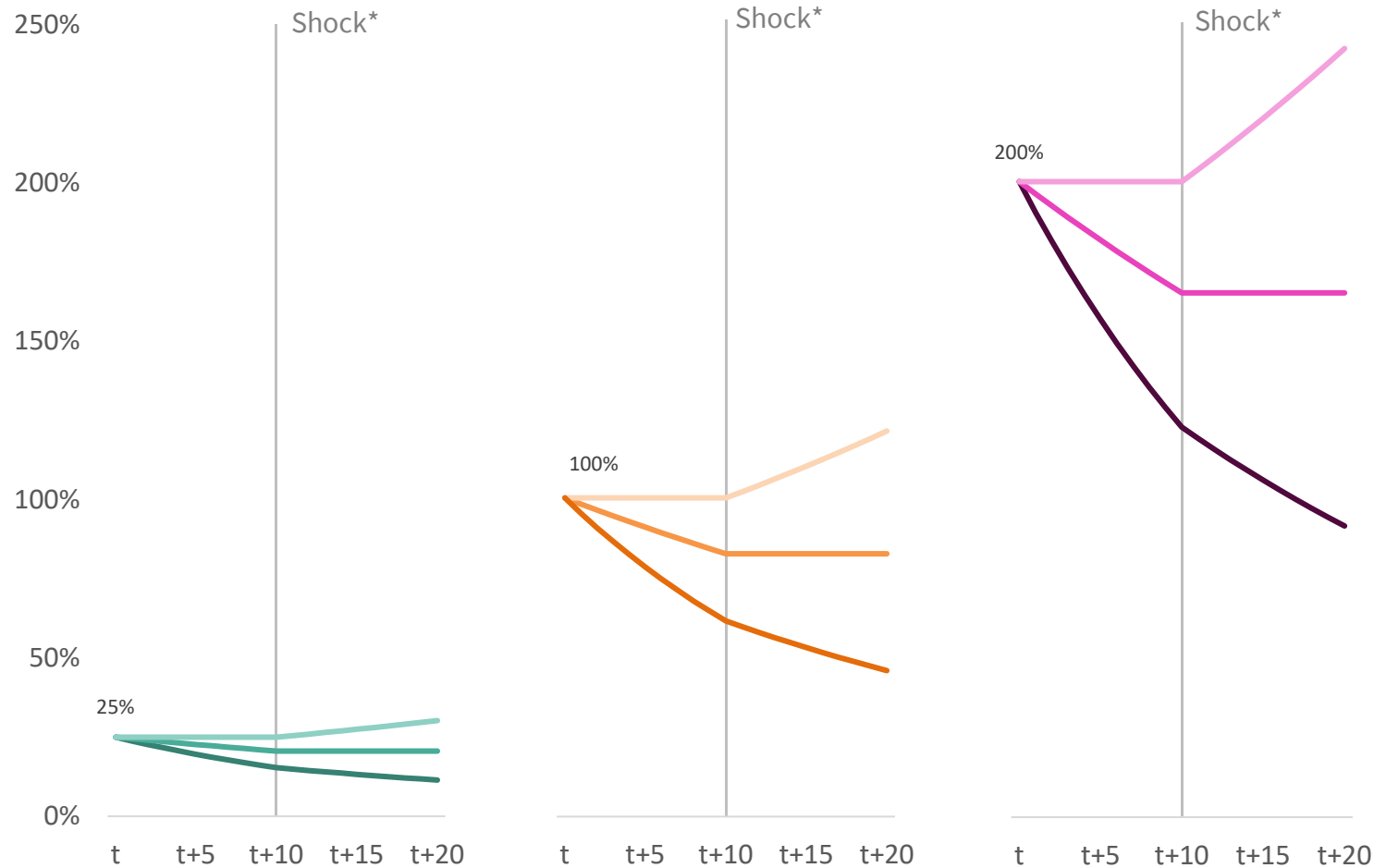
$$\Delta D_t = D_{t-1} \left(\frac{i_t - g_t}{1 + g_t} \right) - PB_t + SF_t$$

Issuance at long maturities helps mitigate risks.

But surge of age-related and health care spending will complicate debt reduction.

Heightened sensitivity: when i-g changes

Debt ratio % GDP



In all cases, i-g is negative before the shock.

When the shock hits, i-g becomes less favourable by 2pp.

Source: [Managing Government Debt at High Altitude paper](#).

Notes: For different starting debt ratios and $PB=0\%$, the figure shows how debt ratios evolve for an illustrative i-g of -5% (darkest lines), -2% , and 0% (lightest lines) and a primary balance = 0. * The shock shows what happens if the i-g differential then worsens by 2 percentage points.

Debt Sustainability Analysis (DSA)

- Historically high debt ratios,
- Heightened sensitivity to interest and growth changes
- Unprecedented monetary support
- Need to give reassurance that debt is sustainable
- Emerging consensus on debt anchor in rules

—————→ DSA becomes even more important

- We analyse EU and IFI practices + build on survey of EU IFIs
- Shed light on DSA roles that IFIs fulfil

DSA in the EC, ECB and IMF

European Commission

Only supranational
European inst. publishing
regular DSAs

Methods published in 2014
& 2016

Enhanced role with ESM

ESM relies on EC DSA

ECB

Produces for internal use

Methods published 2015

IMF

Revised its DSA framework
in 2011

New framework planned
2021

DSA in the EC, ECB and IMF

No consensus definition of debt sustainability across institutions

IMF definition (used by ECB too):

“...sustainable when the primary balance needed to at least stabilise debt under both the baseline and realistic shock scenarios is economically and politically feasible...consistent with an acceptably low rollover risk and with preserving potential growth at a satisfactory level...”

Since financial crisis, increasing number of indicators & multidimensional approach

Heat maps, etc

DSA in the EC, ECB and IMF

Deterministic: baseline uses

- own GDP growth forecasts (e.g., WEO);
- growth converges to potential;
- interest rates rely on market expectations;
- inflation converges to ECB's reference value;
- primary balance = no-policy-change (ECB assumes measures taken to meet SGP requirements).

Stochastic: EC based on variance-covariance matrix of historical shocks (Berti, 2013); IMF and the ECB rely on VAR modelling.

Sustainability indicators: S0, S1, S2 indicators to get 60% including ageing costs

Gross financing needs

Thresholds (EC: 60%, IMF 85% and 20% for Gross Financing Needs)

1) Context

2) Role of IFIs

3) Reflections & Insights

Wide range of mandates

NL CPB	Macro: Official	Budget: Own	DSA: By mandate
ES AIReF	Macro: Endorse w/ own	Budget: Own	DSA: By mandate
LT NAO	Macro: Endorse w/ own	Budget: Own	DSA: By mandate
PT PFC	Macro: Endorse w/ own	Budget: Own	DSA: By mandate
SK CBR	Macro: Assess w/ own	Budget: Own	DSA: By mandate
AT FISK	Macro: Assess	Budget: Own	DSA: By mandate
DK DEC	Macro: Assess w/ own	Budget: Own	DSA: Own
IE IFC	Macro: Endorse w/ own	Budget: Own	DSA: Own
IT UPB	Macro: Endorse w/ own	Budget: Own	DSA: Own
SI SFC	Macro: Assess w/ own	Budget: Own	DSA: Own
SI IMAD	Macro: Official		DSA: Own
CZ CNFC	Macro: Endorse		DSA: By mandate
LV FDC	Macro: Endorse		DSA: By mandate
GR HFC	Macro: Endorse w/ own	Budget: Own	
GR PBO	Macro: Endorse w/ own	Budget: Own	
CY CFC	Macro: Endorse		DSA: Own
DE ABSC	Macro: Endorse	Budget: Own	
RO RFC	Macro: Endorse		DSA: Own
BU BFC	Macro: Endorse		
EE EFC	Macro: Endorse		
FI EPC	Macro: Assess		
FI NAO	Macro: Assess		
FR HCPF	Macro: Endorse		
HU HFC	Macro: Endorse		
LU NCPF	Macro: Assess		
MT MFAC	Macro: Endorse		
SE FPC	Macro: Endorse		
HR FPC			
NL RVS			

~1/3 have official mandate for DSA, while another 1/3 do on own initiative

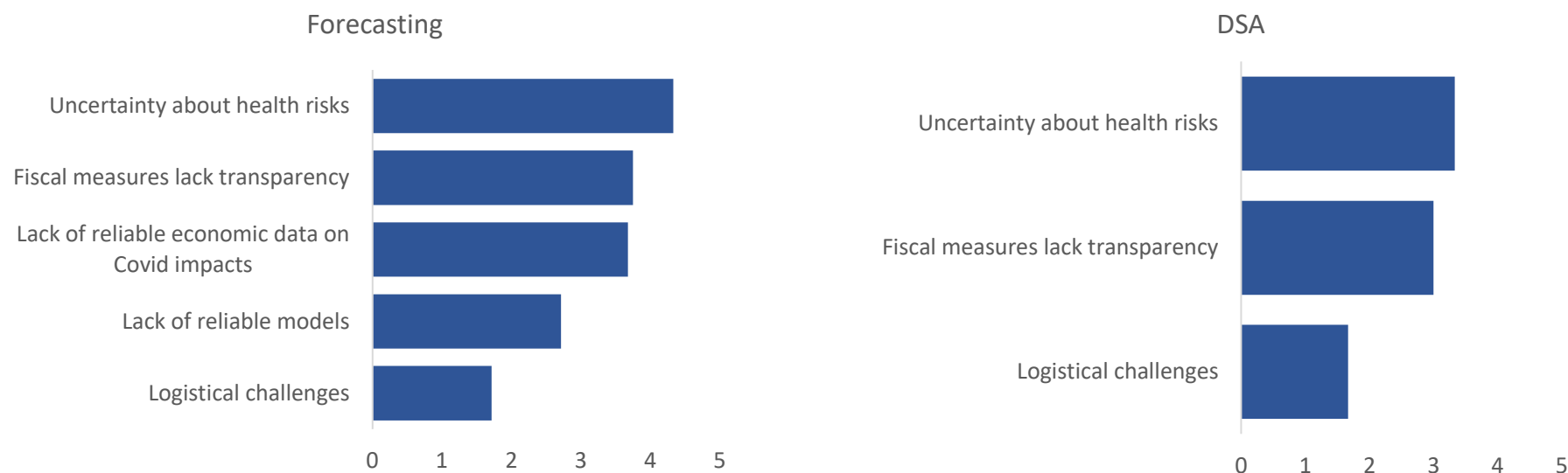
Note: Mandates relating to macro, fiscal and debt sustainability analysis forecasts
Source: Network of EU IFIs (2020)

DSA a common feature of mandates

- This can be through short- or medium-term DSAs
- It can also be through long-term assessments of fiscal sustainability

Some challenges faced

Challenges (% of total respondents)



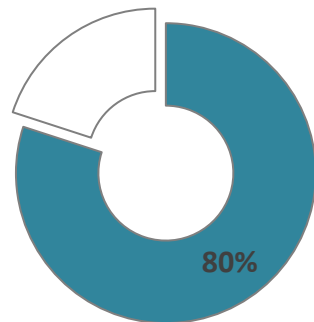
Note: For forecasting, respondents were asked “What were the main challenges you faced in terms of forecasting during Covid? Importance (from 1 - unimportant to 5 - very important). For DSA, respondents were asked “What were the main challenges related to debt sustainability analysis? How would you evaluate their importance?” On average, 13 IFIs responded.

Source: Network of EU IFIs (2020).

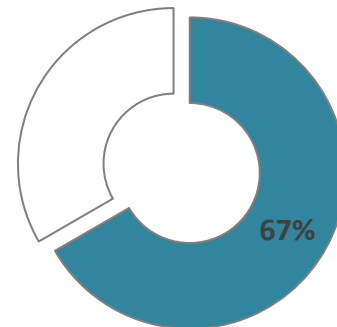
Practices evolving in light of Covid

Shift to IFIs using new analytical approaches (% of total respondents)

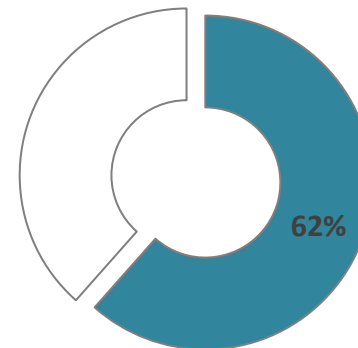
Scenario Analysis



New high-frequency data



Changed methodologies



■ Used □ Not used

Notes: Respondents were asked: “Did the new forecast distinguish between baseline and OWN scenarios?”; “Did your institution use new sources of high frequency data?” ; and Did you change the methodology of your forecast due to Covid-19?”. On average, 14 IFIs responded.

Source: Network of EU IFIs (2020)

DSA as practised reveals IFI preferences

DETERMINISTIC

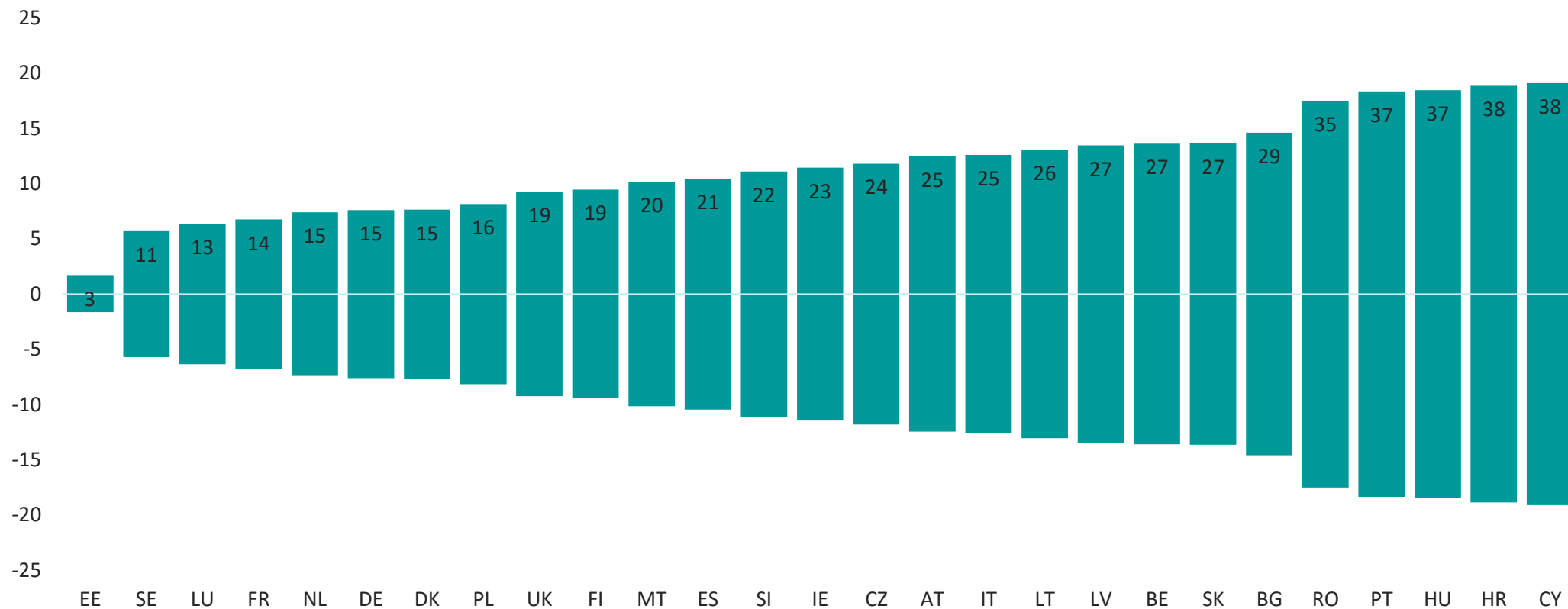
- Simplest
- Most common: 9/15 IFIs practicing DSA rely on it
- But
 - well-documented optimism bias (Guzmann and Heymann, 2015): $g \rightarrow$ potential, fiscal adjustment feedback downplayed
 - endogeneity issues (growth and revenue; spreads; inflation)

STOCHASTIC

- Captures uncertainty
- Less common: 6/15 IFIs
- But
 - assumes history is good guide to future dynamics/uncertainty;
 - less clear narrative;
 - uncertainty widens quickly;
 - how to reflect ageing + climate change?

Stochastic DSAs can come with very high uncertainty

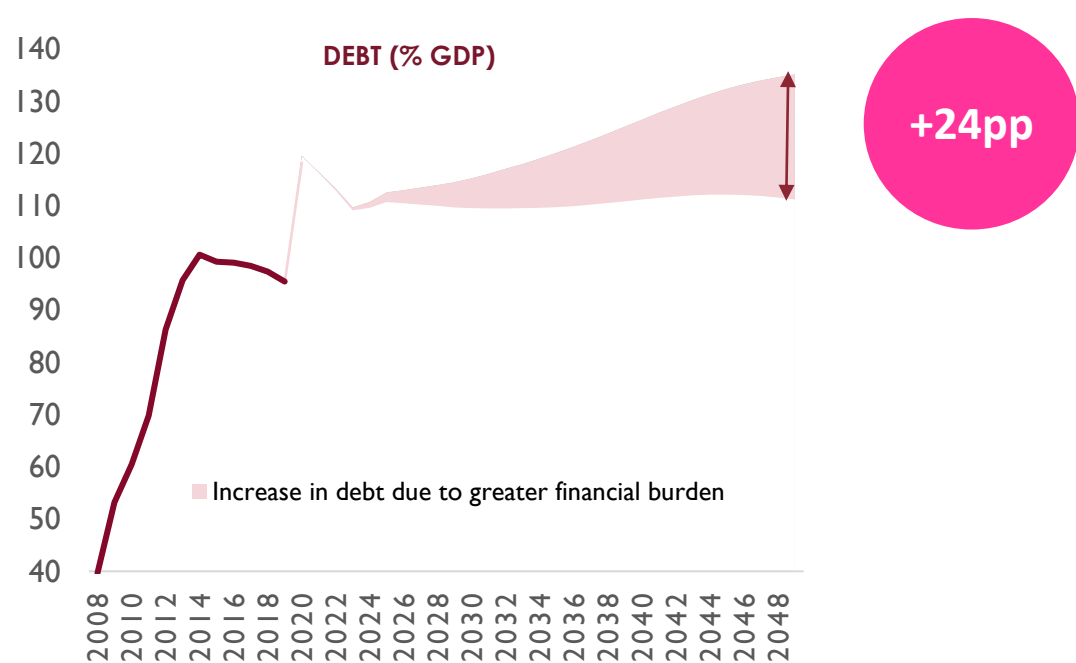
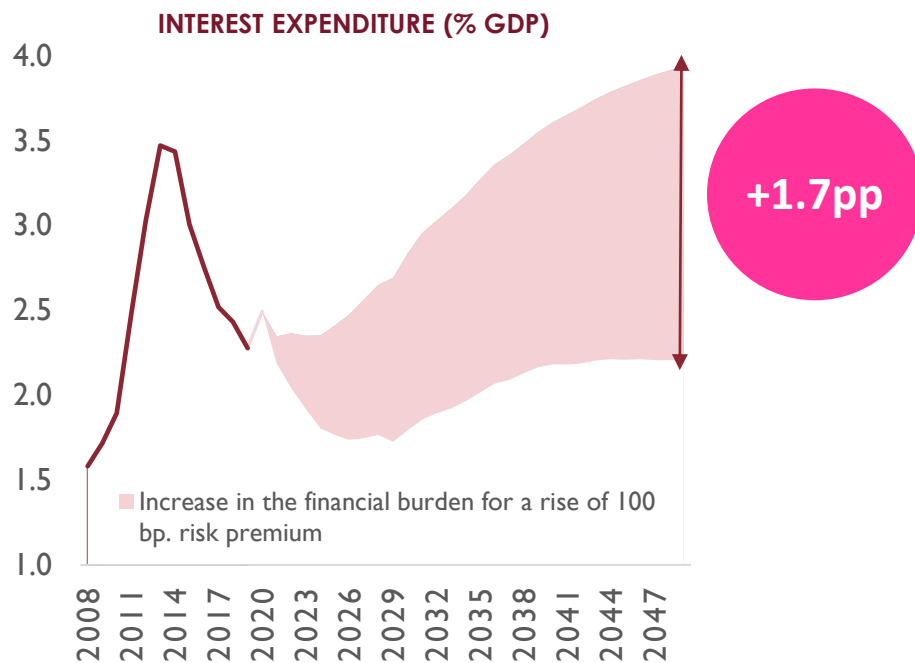
Stochastic debt projection ranges (percentage points, 10th-90th percentile)



Notes: The figure shows the differences between the 10th and 90th percentiles for stochastic projections of debt ratios in 2024 (in p.p. of GDP) based on the European Commission's (2020a) Debt Sustainability Monitor 2019.

Source: Network of EU IFIs (2020); and European Commission Debt Sustainability Monitor 2019.

Example: DSA in Spain post-Covid

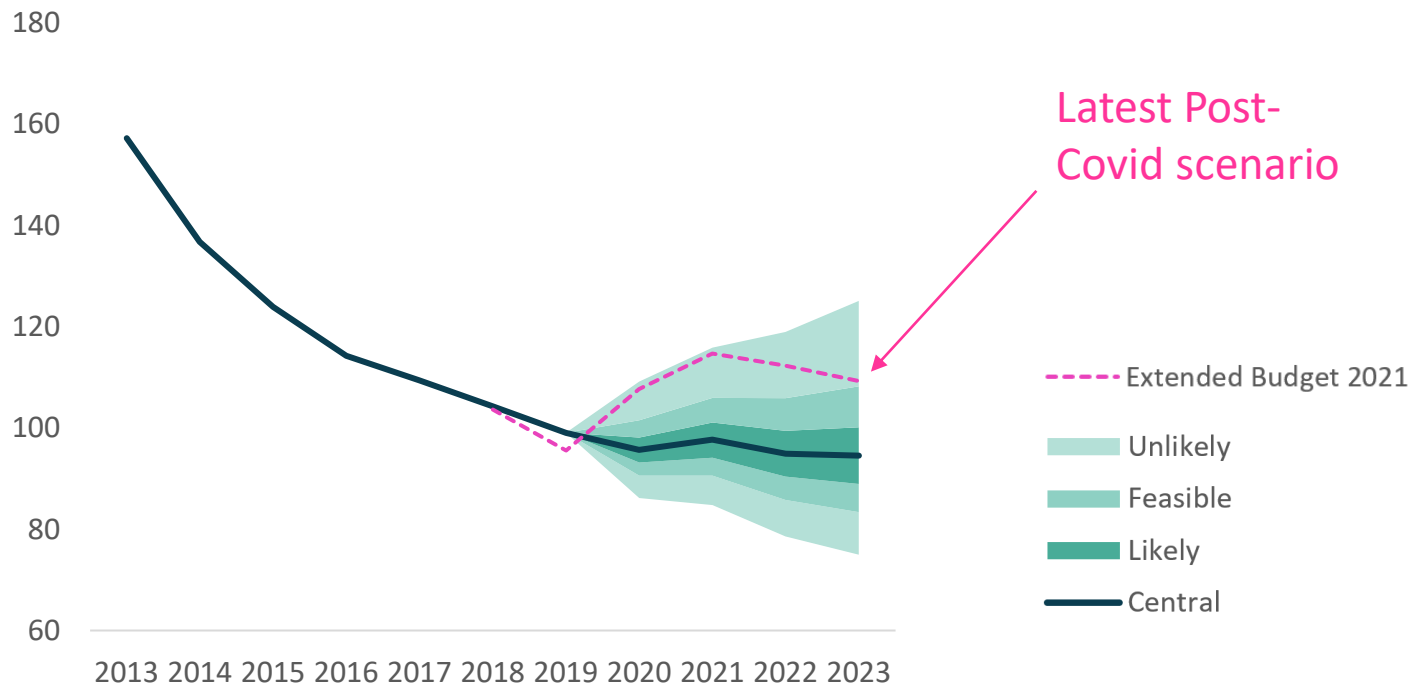


Example: DSA in Ireland based on pre-Covid data

“Maq” – a macro-fiscal model that produces stochastic DSAs

3 key eq’ns: growth, marginal interest rate; and Phillips curve; feedbacks between macro and fiscal side

% GNI*, gross general government debt



Source: [Maq: A Macro-Fiscal Model for Ireland Casey and Purdue \(2021\)](#).

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Some Reflections

Deterministic and stochastic DSAs both important

- Deterministic for scenario analysis, such as in Covid era
- Stochastic when things are steady (no clear scenarios to emphasise)
- Complementary role

IFIs have responded by changing their modelling approaches and assumptions about growth and interest rates

But deep questions remain: lasting impacts on growth from pandemic; persistence of low interest rates; appropriate policy

Practical insights

IFIs should :

- (1) be upfront about their growth and interest rate assumptions and open to alternatives;
- (2) continue to develop scenario analysis and stochastic DSAs;
- (3) bring greater transparency to fiscal measures introduced;
- (4) develop medium-term projections where these are lacking; and
- (5) remind us of the long-term fiscal challenges that have not gone away



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