

Sovereign debt and fiscal integration in the European Union

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Based on the papers:

- Darvas, Zsolt, Lennard Welslau, and Jeromin Zettelmeyer (2025) 'Sovereign Debt and Fiscal Integration in the European Union', *Journal of Economic Perspectives* 39(4), 49–74.
- Zettelmeyer, Jeromin, Zsolt Darvas and Lennard Welslau (2025) 'What Germany's medium-term fiscal plan means for Europe', *Policy Brief 28/2025*, Bruegel



Motivation and outline

How far have we come since the 2010-12 crisis? How problematic are current debt and deficit levels? How strong is the euro fiscal architecture? Are fiscal rules as good as they can be?

1. Doom-loop between banks and sovereign

- Market reactions to the Transmission Protection Instrument (TPI – introduced in 2022) as a “test” for preceding improvements in Euro fiscal backstops

2. Solvency

- Debt stabilisation and fiscal reaction functions

3. Rules

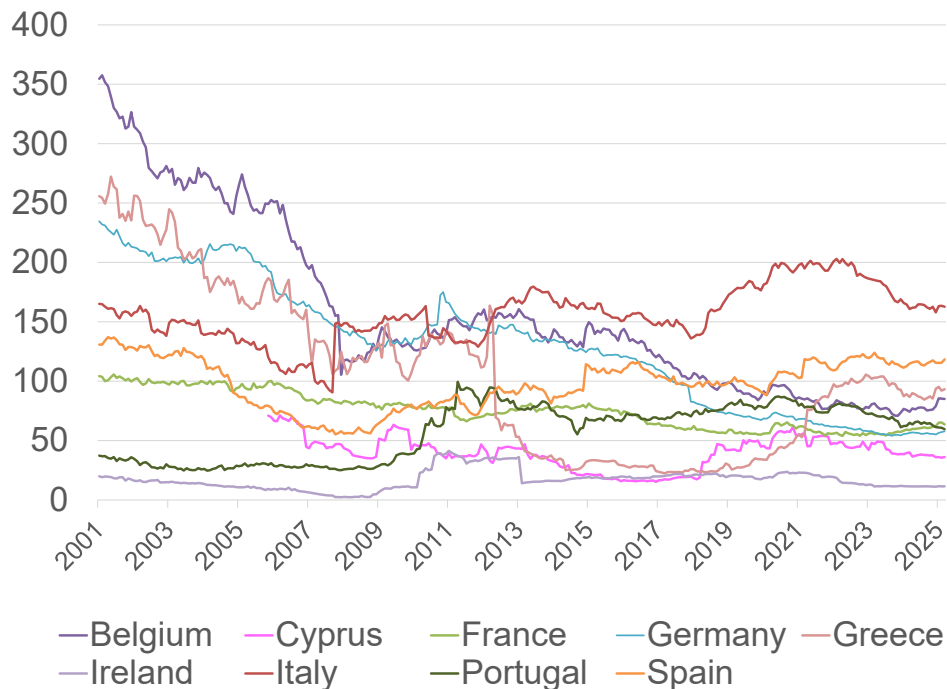
- Adequacy of the new (April 2024) European fiscal rules

4. EU safe assets

- Needed? How?

Bank exposure to the domestic government remains high in some countries ...

Bank exposure to the domestic sovereign in selected euro-area countries, 2001-2025 (in percent of equity capital)



... but does it matter, sovereign liquidity backstops?

- European Stability Mechanism (ESM - 2012)
- Outright Monetary Transactions (OMT - 2012)
- Willingness of European Central Bank to go off capital key (e.g. Pandemic Emergency Purchase Programme - 2020)
- Transmission Protection Instrument (TPI - 2022)

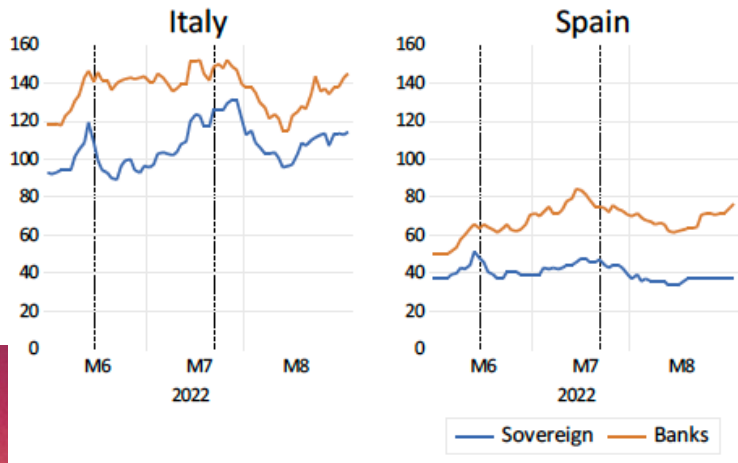


Idea: compare market reactions to TPI to those to OMT

- Various institutional changes since the euro crisis.
- The more effective preceding changes, the less you would expect TPI to matter.

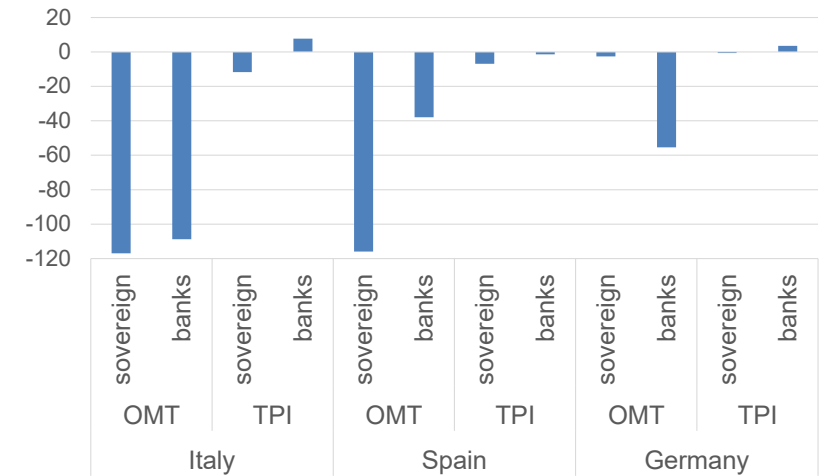
Results of a small event study a la Altavilla et al (2016):

1. Much smaller reactions to TPI than to OMT announcements
2. Unlike OMT, TPI announcement effect for Italy and Spain only on sovereigns -- not sovereigns *and* banks.
3. Unlike OMT, no permanent declines in sovereign CDS spreads after TPI. Main effect was to reverse previous increase.



Vertical lines: TPI announcement dates

Effects of OMT and TPI announcements on sovereign and bank CDS spreads in Italy, Spain and Germany*



* Note. Bars show the sum of the estimated coefficients for six OMT-related dummy variables and four TPI-related dummy variables. The null hypothesis that the sum of the estimated parameters of the dummy variables is zero is rejected for three cases (excluding TPI effects on banks) for Italy and Spain. For Germany, only the impact of the OMT announcements on banks is statistically significant.



Debt sustainability

Is the fiscal effort required to stabilise the debt ratio feasible?

Answer using two approaches.

1. Estimate country-specific debt-stabilising structural primary balance (SPB*)

- Assume that it must be reached in 7 years.
- Use stochastic debt projections to compute SPB* for 7 years from now.
- Assess feasibility of (1) Level of SPB* and (2) adjustment needed to reach SPB*, based on historical precedent, country plans, and IMF projections.

2. Estimate fiscal reaction functions

- Estimate feedback from debt to the primary surplus. If this is strong enough, debt is sustainable.
- Worry particularly about the possibility of weakening feedback over time.

Estimating SPB*

SPB* is the structural primary balance after 7 years that will stabilise debt with probability 70%.

- Determine this using a 20-year stochastic debt forecast conditional on EU projected growth and ageing costs, market-implied future interest rates and inflation.
- Main differences with European Commission methodology:
 1. Modelling of uncertainty
 - Allow asymmetric distribution of shocks rather than assuming normality
 - Allow uncertainty during the adjustment period
 - 20-year fanchart rather than 5-year fanchart
 2. Definition of debt stabilisation:
 - Asymptotic: $\lim_{t \rightarrow \infty} d_t = d$. No requirement for debt ratio to fall immediately after end of adjustment period. Instead of infinity, we assume a 20-year period.

1 generally makes our methodology "tougher" than the Commission's. 2 makes it less tough.

Result: adjustment requirements

- Levels of SPB*** required to stabilize/reduce debt are generally within historic precedent. Exceptions: Greece, Hungary. For Greece, this reflects volatility during debt crisis; likely too pessimistic.
- Ten countries (yellow shade in column 5) require **adjustments** of more than 3 percent of GDP. Six countries require adjustment of more than 4 percent of GDP.

	Solvency						
	2024 outcomes			Required adjustment		Comparison with medium-term fiscal plans (MTPs)	
	Debt	Fiscal balance	SPB	SPB*	SPB* - SPB (2024)	SPB*(MTP)	SPB*(MTP) - SPB*
	(1)	(2)	(3)	(4)	(5)=(4)-(3)	(6)	(7)=(6)-(4)
Greece	154	1.3	4.0	3.2	-0.8	2.3	-0.9
Italy	135	-3.4	-0.3	2.5	2.7	3.2	0.7
United States	124	-7.5	-4.0	1.8	5.7	-4.0	-5.7
France	113	-5.8	-3.7	1.2	4.9	1.8	0.6
Spain	102	-3.2	-0.7	2.3	3.0	2.3	0.0
Belgium	105	-4.5	-2.0	1.7	3.7	1.6	-0.1
United Kingdom	101	-6.0	-2.5	1.7	4.3	1.0	-0.7
Portugal	95	0.7	2.4	2.9	0.5	2.9	0.0
Finland	82	-4.4	-1.1	0.6	1.7	2.6	2.0
Austria	82	-4.7	-2.5	0.6	3.1	1.2	0.6
Hungary	73	-4.9	0.5	3.7	3.2	2.8	-0.9
Cyprus	65	4.3	4.1	1.4	-2.8	2.4	1.1
Slovenia	67	-0.9	0.1	1.8	1.7	0.5	-1.3
Germany	62	-2.8	-1.0	0.3	1.3	1.1	0.8
Slovakia	59	-5.3	-3.8	1.7	5.5	1.0	-0.7
Poland	55	-6.6	-3.9	1.8	5.7	0.4	-1.4
Romania	55	-9.3	-6.4	2.3	8.7	1.7	-0.6

Note: in column 6, for the UK, the March 2025 projections of the Office for Budget Responsibility, while for the US, the May 2025 CBO projections are reported.

Is the required adjustment plausible? Three benchmarks

1. What countries plan to do: generally encouraging (see last column of table).
 - Caveat: pressures to spend more on defence (and Commission forbearance) not fully incorporated in the medium-term fiscal plans
 - United States: Congressional Budget Office expects unchanged primary balance over the next ten years, implying continued to debt ratio increases.
2. Historic precedent: discouraging.
 - For France, frequency of “required” adjustment of 4.9% of GDP is 11% in whole sample of all countries since 1970, and unprecedented in France.
 - For Romania, frequency of adjustment of 8.7% of GDP is 3% in whole sample of all countries since 1970, unprecedented in Romania
3. What the IMF thinks countries will do: generally discouraging
 - For the most part, October 2025 IMF World Economic Outlooks expects countries to adjust significantly less than agreed in countries’ medium-term fiscal-structural plans, particularly in outer years.

Bottom line: Plans notwithstanding, largest adjustment are likely to take longer than 7 years. Fine, so long as financing is available.

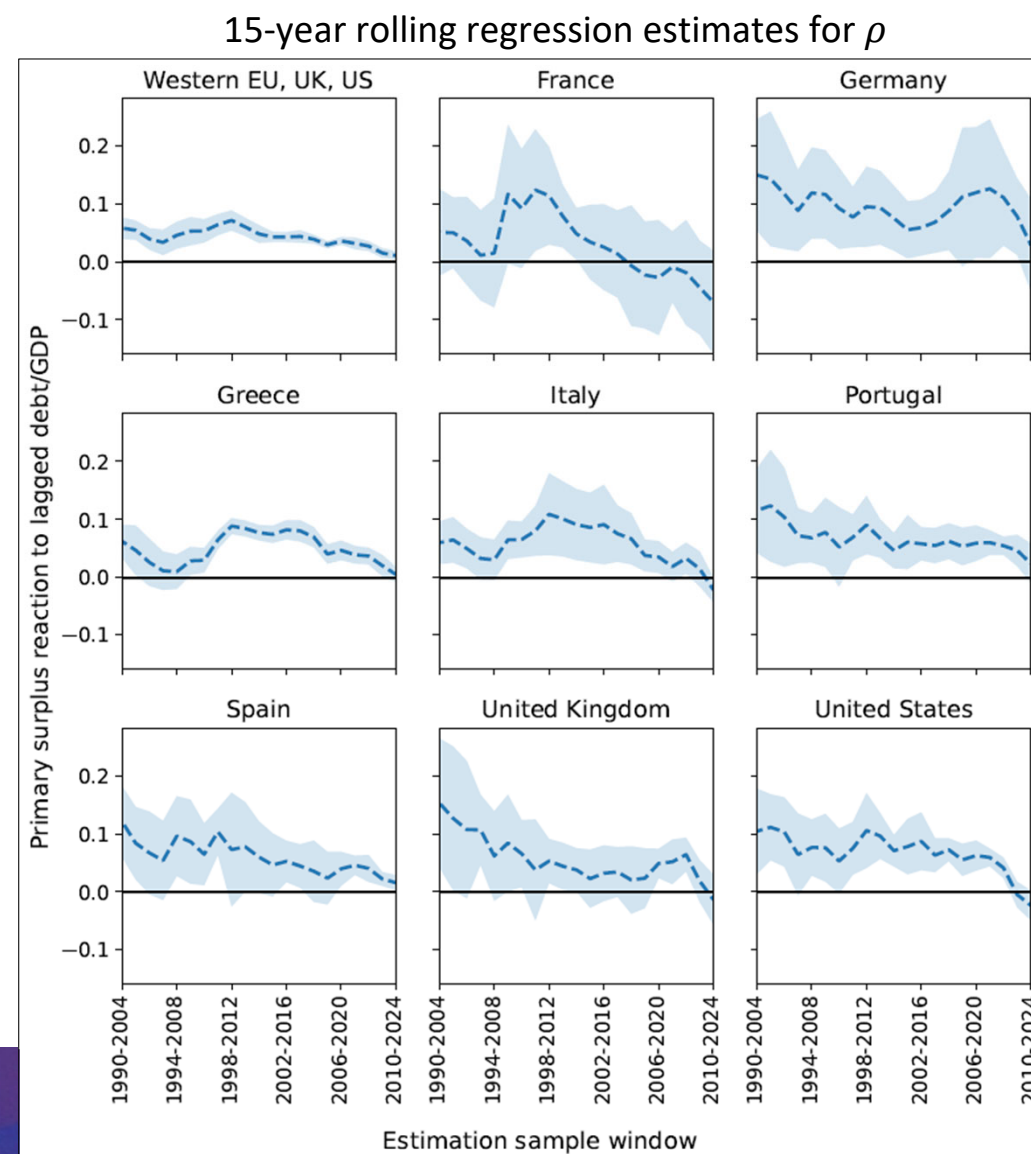
Estimating fiscal reaction functions

$$s_{i,t} = \rho d_{i,t-1} + z_{i,t} + \epsilon_{i,t}$$

where $s_{i,t}$ is the primary balance (% GDP), $d_{i,t-1}$ is public debt (% GDP), $z_{i,t}$ is a set of controls (lagged $s_{i,t}$, output gap, year and country fixed effects).

Debt stabilises if $\rho > r_t - g_t$.

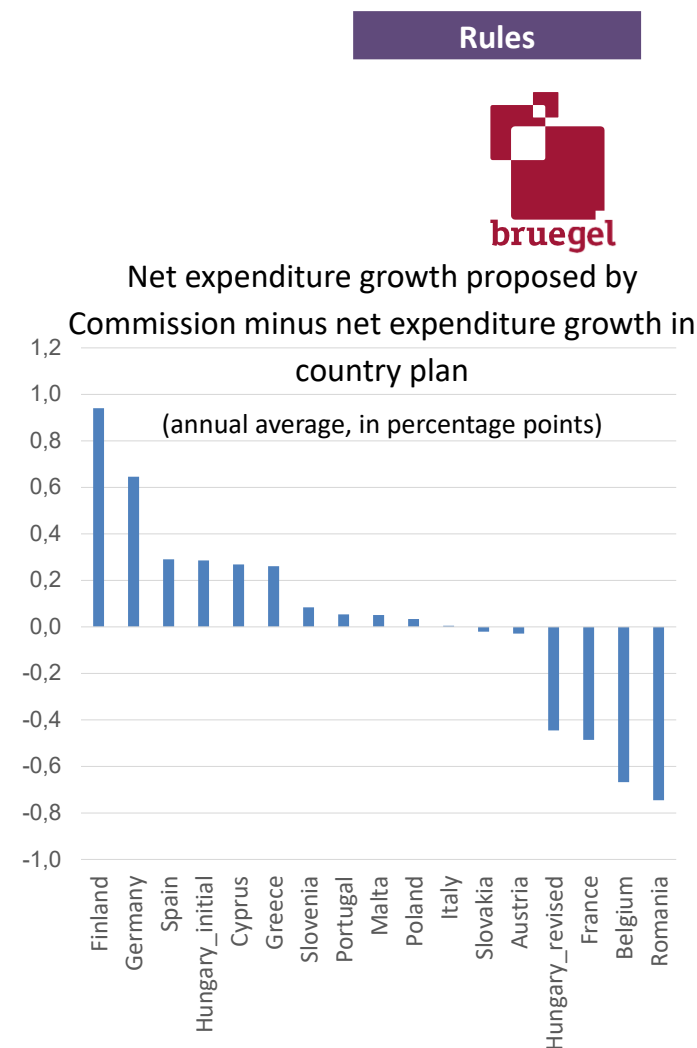
- Estimate using panel regression EU13+UK+US.
- Obtain country-specific coefficients estimates by interacting lagged debt with country dummies.
- 15-year rolling regressions shows recent decline (chart).



The new European fiscal rules: first lessons

1. Negotiations in good faith.
 - Outcomes not systematically weaker than reference paths, except for Finland and Germany (chart)
2. Optimistic growth assumptions for some countries.
3. Not very public investment-friendly.
 - Aggregate planned increase of public investment is just 0.25 of EU GDP p.a. (driven by Germany)
 - Adjustment and change in public investment remain closely correlated
4. Rules are too stringent ex ante for countries with low fiscal risks but debt close to, or above, 60 percent of GDP.
 - Makes plans inefficient, and encourages optimistic assumptions

Illustration of points 2 and 4: Germany's medium-term fiscal-structural plan (July 2025, Commission approval on September 16, 2025)



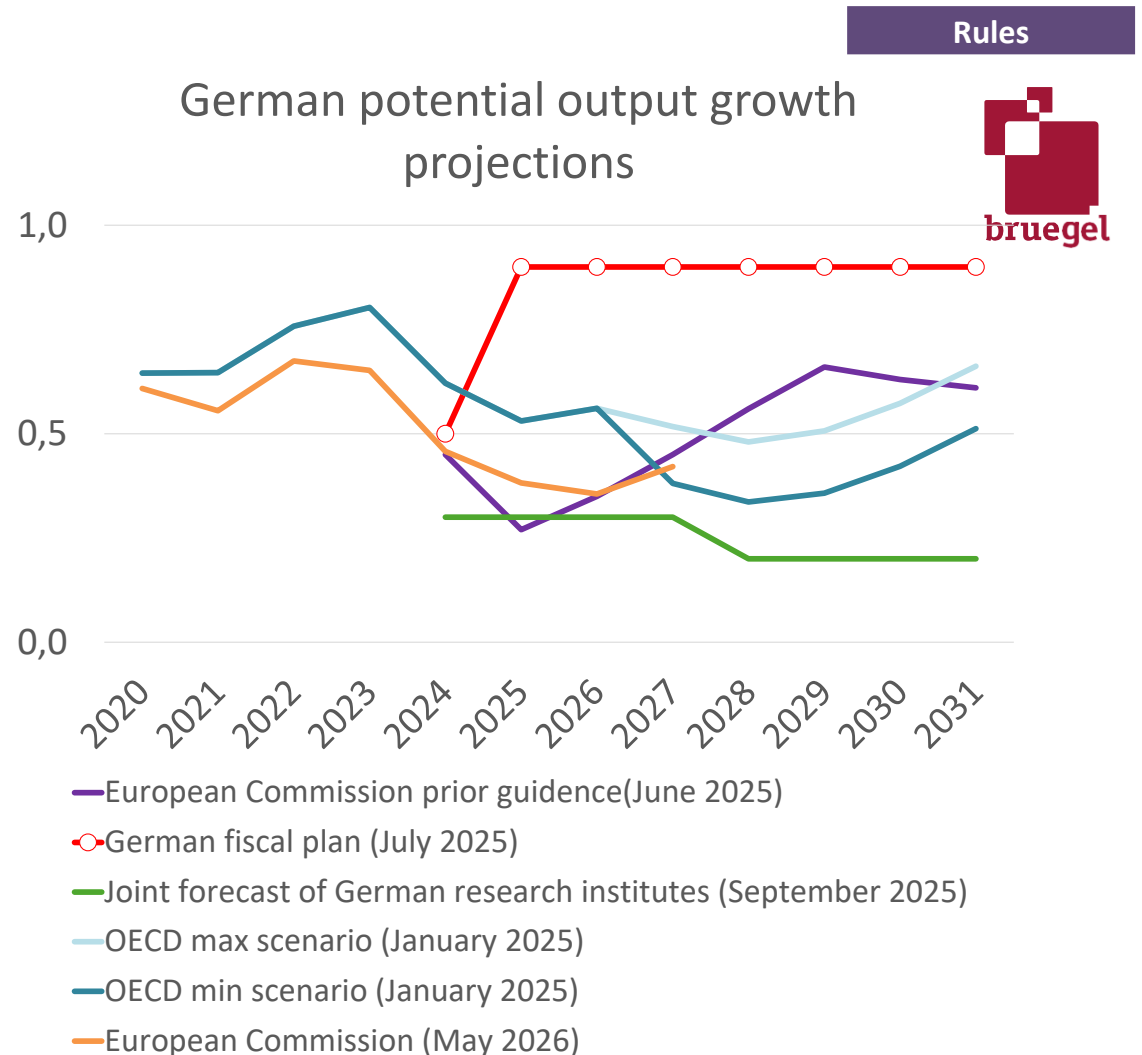
Germany's fiscal-structural plan

To reconcile its investment/defence spending plans with EU rules, Germany is:

1. Making (over-)optimistic growth assumptions
2. Promising brutal (and hardly credible) adjustment in the outer years of its plan.

Likely outcome: substantially lower SPB and higher debt than projected.

But attempt to stick to agreed expenditure targets may still put the economy through an unhealthy rollercoaster.



NEC = National escape clause for defence spending, which allows maximum 1.5% of GDP extra spending defence spending.



Is there a need and scope for more EU safe assets?

- Current landscape: 90% of EU public debt by countries, 10% by institutions (EU, ESM, EFSF, EIB)
- Possible roles of EU assets: Strengthen financial stability; Lower borrowing costs; Deepen capital market integration; Enhance the international role of the euro.
- How to increase the supply:
 1. Finance EU public goods (e.g. defence, climate, strategic investment);
 2. Substitute national debt with EU debt (Delpa and von Weizsäcker, 2010; Brunnermeier et al., 2011, 2017; Blanchard and Ubide, 2025).
- Key challenge with option 2: markets do not treat EU debt as sovereign debt, limiting investor base and preventing EU debt to have “negative beta” property – that is, rise in value during stress (Bonfanti and Marcucci, 2025; Lappe and Zettelmeyer, 2026).
- Policy implications:
 1. Do not retire existing EU debt.
 2. Partially replace national debt with EU debt.
 3. Ensure a dedicated EU-level revenue stream to service EU debt.



Conclusions

- 1. Stronger crisis resilience:** Despite a latent bank-sovereign doom loop, the euro area is far better equipped than in 2012 to manage liquidity stress.
- 2. Debt sustainability:** Debt in EU countries remains sustainable in the sense that debt-stabilising primary surpluses remain well below 3 percent of GDP (exc. GR, HU).
- 3. Adjustment challenge:** Very large fiscal adjustments needed in France, Poland, Hungary, Slovakia, Romania (also UK and US), which seems unrealistic in 7 years, especially given rising defence spending pressures.
- 4. Market dependence:** Countries with high adjustment needs are exposed to shifts in market confidence.
- 5. EU fiscal rules:** Allow more space for low-risk countries, even with debt >60% of GDP, to protect and expand public investment.
- 6. EU safe assets:** Swapping national for EU debt is economically justified if backed by a dedicated EU revenue stream.

Thank you!

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