



DG ECFIN

Fiscal governance and budgetary surveillance reform in the EU

Anna Iara

European Commission

ECFIN.C.4 Fiscal governance and fiscal statistics

wiiw, 29 November 2010

- ✓ EU economic governance reform proposal
- ✓ Proposal for a Council directive on requirements for domestic budgetary frameworks
- ✓ The impact of rules-based national fiscal governance on sovereign bond spreads

Legislative proposals: overview

Budgetary surveillance

- ✓ Amendments to reg. 1466/97
- ✓ Amendments to reg. 1467/97
- ✓ New directive on domestic budgetary frameworks

Enforcement

New regulation on effective enforcement of budgetary surveillance

Macroeconomic surveillance

New regulation on prevention and correction of macroeconomic imbalances

Enforcement

New regulation on effective enforcement of macroeconomic surveillance

Legislative proposals: budgetary surveillance

Amendments to reg. 1466/97 – EDP preventive arm

- ✓ to date: medium-term objective
- ✓ new: expenditure growth/prudent fiscal policy making

Amendments to reg. 1467/97 – EDP corrective arm

- ✓ to date: deficit criterion
- ✓ new: operationalising the debt criterion

Requirements on domestic budgetary frameworks

- ✓ new: strengthen fiscal governance at member states' level

Enforcement

- ✓ new: earlier sanctions, reverse voting

Legislative proposals: macroeconomic surveillance

Macroeconomic imbalances

- ✓ to date: Broad Economic Policy Guidelines:
- ✓ new: focus on imbalances, formalise evaluation
- ✓ preventive and corrective dimension

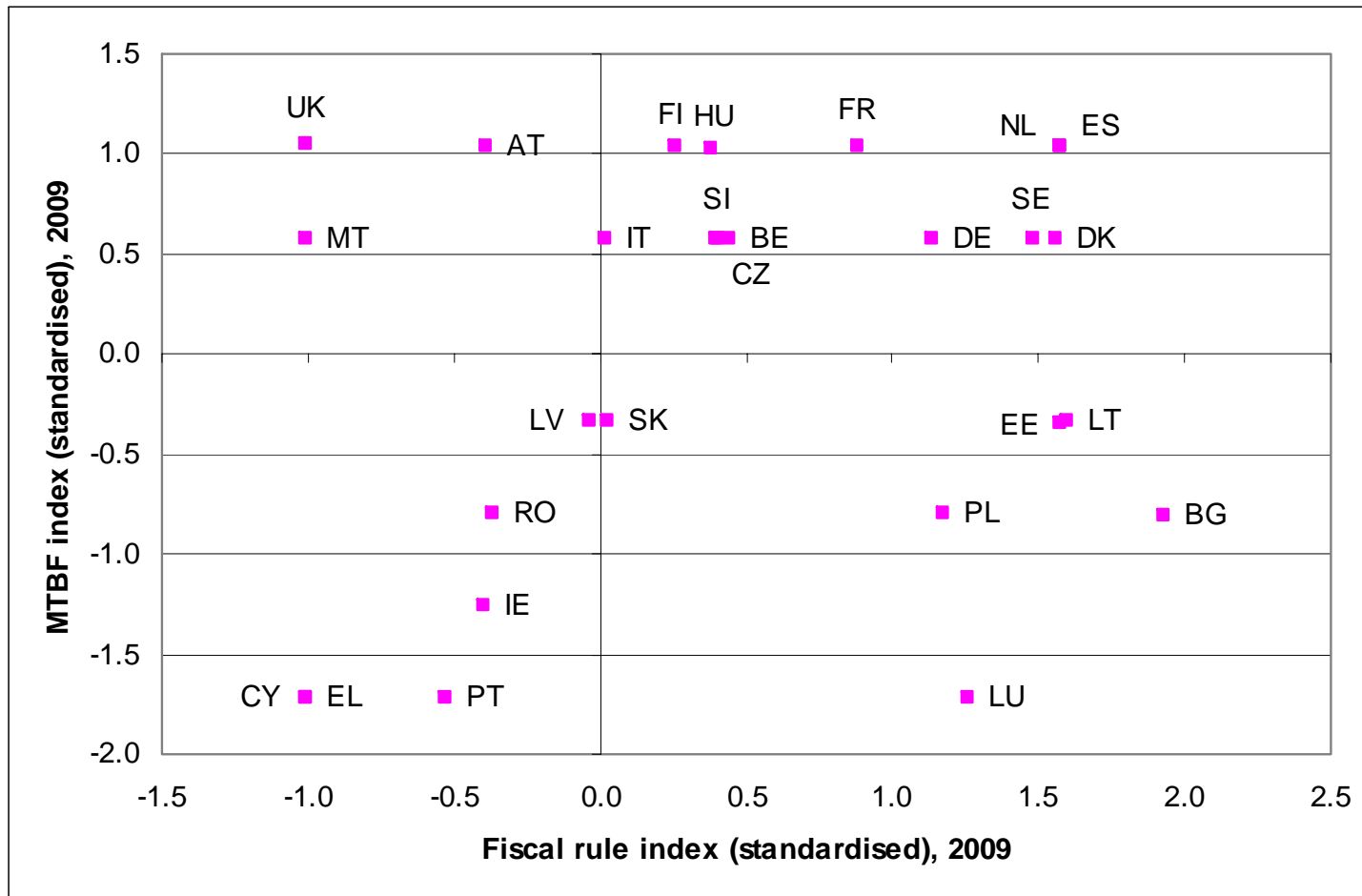
Enforcement (euro area)

- ✓ fine (0.1% GDP) on repeated insufficient corrective action/plan; reverse voting

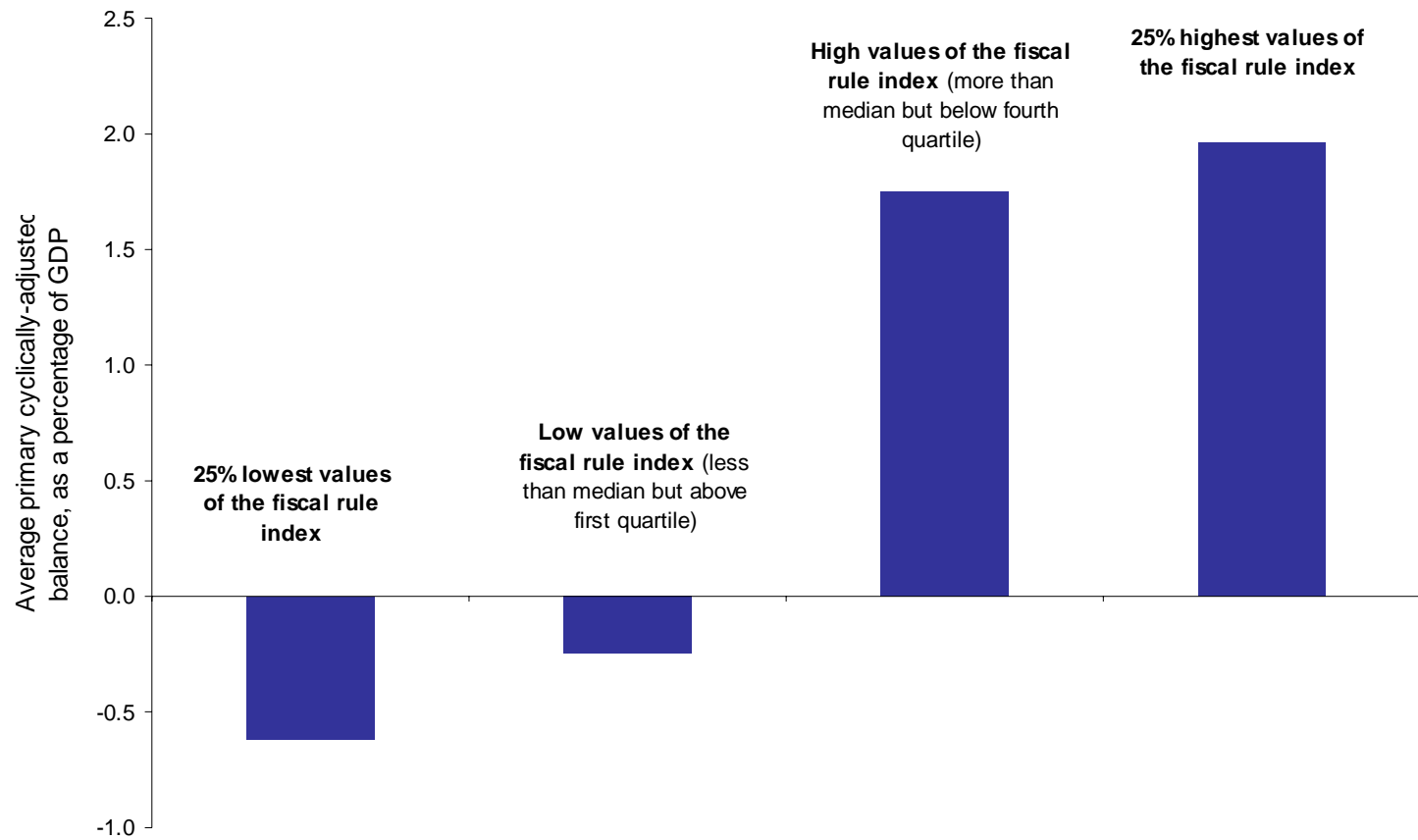
Domestic budgetary frameworks: point of departure

- ✓ Variation in fiscal governance quality across EU members
- ✓ Fiscal frameworks effective in supporting sound fiscal policies
- ✓ EU budgetary framework insufficiently entrenched in national fiscal governance
 - enforcement cannot derive only from EU level provisions
 - EMU needs consistency of domestic and EU budgetary frameworks

Domestic budgetary frameworks: where do member states stand?



Domestic budgetary frameworks: why useful?



Draft Council directive on requirements for the budgetary frameworks of the Member States

Minimum requirements:

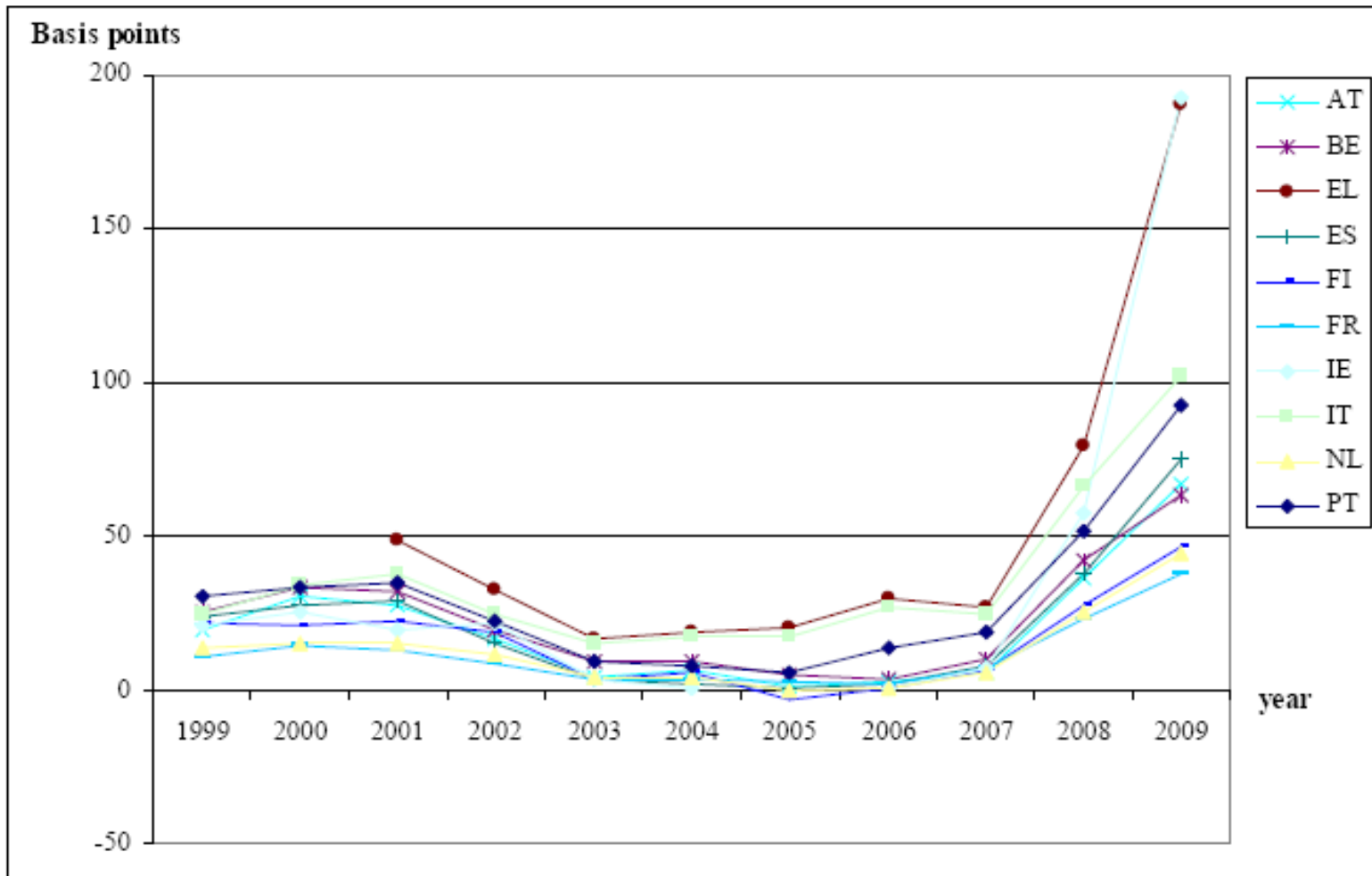
- ✓ accounting and statistics
- ✓ macroeconomic and budgetary forecasts
- ✓ numerical fiscal rules
- ✓ medium-term budgetary frameworks
- ✓ transparency of general government finances;
comprehensive scope of budgetary frameworks

Compliance of member states expected by end-2013

**Rules and risk in the euro area:
does rules-based national fiscal governance
contain sovereign bond spreads?**

(with Guntram B. Wolff)

Sovereign bond spreads in 10 euro area members



Motivation

- ✓ High sovereign spreads - growing public debt
- ✓ Fiscal profligacy in good times
- ✓ Reform proposals calling to strengthen fiscal governance
- ✓ Commitment to consolidate

Our paper

- ✓ Assess impact of fiscal rules on sovereign risk
- ✓ Unique and detailed dataset on numerical fiscal rules

Numerical fiscal rules

Permanent constraints on summary indicators of fiscal performance (Kopits and Symansky, 1998)

Why numerical fiscal rules?

Deficit bias...

- ... common pool problem of governments without centralised spending powers
- ... time inconsistent preferences
- ... supranational externality

Literature: fiscal rules

- ✓ USA: von Hagen (1991); Bayoumi and Eichengreen (1994); Alesina and Bayoumi (1996); Bohn and Inman (1996)
- ✓ Creative accounting: von Hagen and Wolff (2006); Buti et al. (2007)
- ✓ Enforce compliance: Inman (1996); Ayuso-i-Casals et al. (2009)
- ✓ Commitment device: Debrun and Kumar (2007); Debrun (2007); Debrun et al. (2008)
- ✓ Forms of fiscal governance: von Hagen, 2010

Literature: determinants of sovereign spreads

- ✓ Common risk factor: Favero et al. (1997); Lemmen and Goodhart (1999); Codogno et al. (2003)
- ✓ Fiscal fundamentals and transparency: Bernoth et al. (2004); Bernoth and Wolff (2008); Heppke-Falk and Wolff (2008); Schulz and Wolff (2009); Schuknecht et al. (2009)
- ✓ Banking and external imbalances: Barrios et al. (2009); Gerlach, Schulz and Wolff (2010), Ejsing and Lemke (2010)
- ✓ Fiscal institutions: Poterba and Rueben (1999); Hallerberg and Wolff (2008)

Our approach

Risk neutrality – no-arbitrage condition:

$$1 + r^* = (1 - \theta_{i,t+1})(1 + r_{i,t}) \Rightarrow r_{i,t} - r^*_t = \theta_{i,t+1}$$

with r^* return to risk-free asset

$r_{i,t}$ return of bond issued by country i

$\theta_{i,t}$ default probability of country i

Allow for risk aversion:

$$1 + r^* = \alpha (1 - \theta_{i,t+1})(1 + r_{i,t}) \text{ with } \alpha \geq 1$$

$$\Rightarrow r_{i,t} - r^*_t = \alpha_t \theta_t$$

Determinants of sovereign default:

$$\theta_{i,t} = \xi (E_t (X_{i,t+1}), E_t(B_{i,t+1}), E_t(s_{i,t+1}), c_i)$$

Thus: $r_{i,t} - r^*_t = f(\alpha_t, E_t(X_{i,t+1}), B_{i,t}, s_{i,t}, E_t(s_{i,t+1}), c_i)$

Our approach

Risk neutrality – no-arbitrage condition:

$$1 + r^* = (1 - \theta_{i,t+1})(1 + r_{i,t}) \Rightarrow r_{i,t} - r^*_t = \theta_{i,t+1}$$

with r^* return to risk-free asset

$r_{i,t}$ return of bond issued by country i

$\theta_{i,t}$ default probability of country i

Allow for risk aversion:

$$1 + r^* = \alpha (1 - \theta_{i,t+1})(1 + r_{i,t}) \text{ with } \alpha \geq 1$$

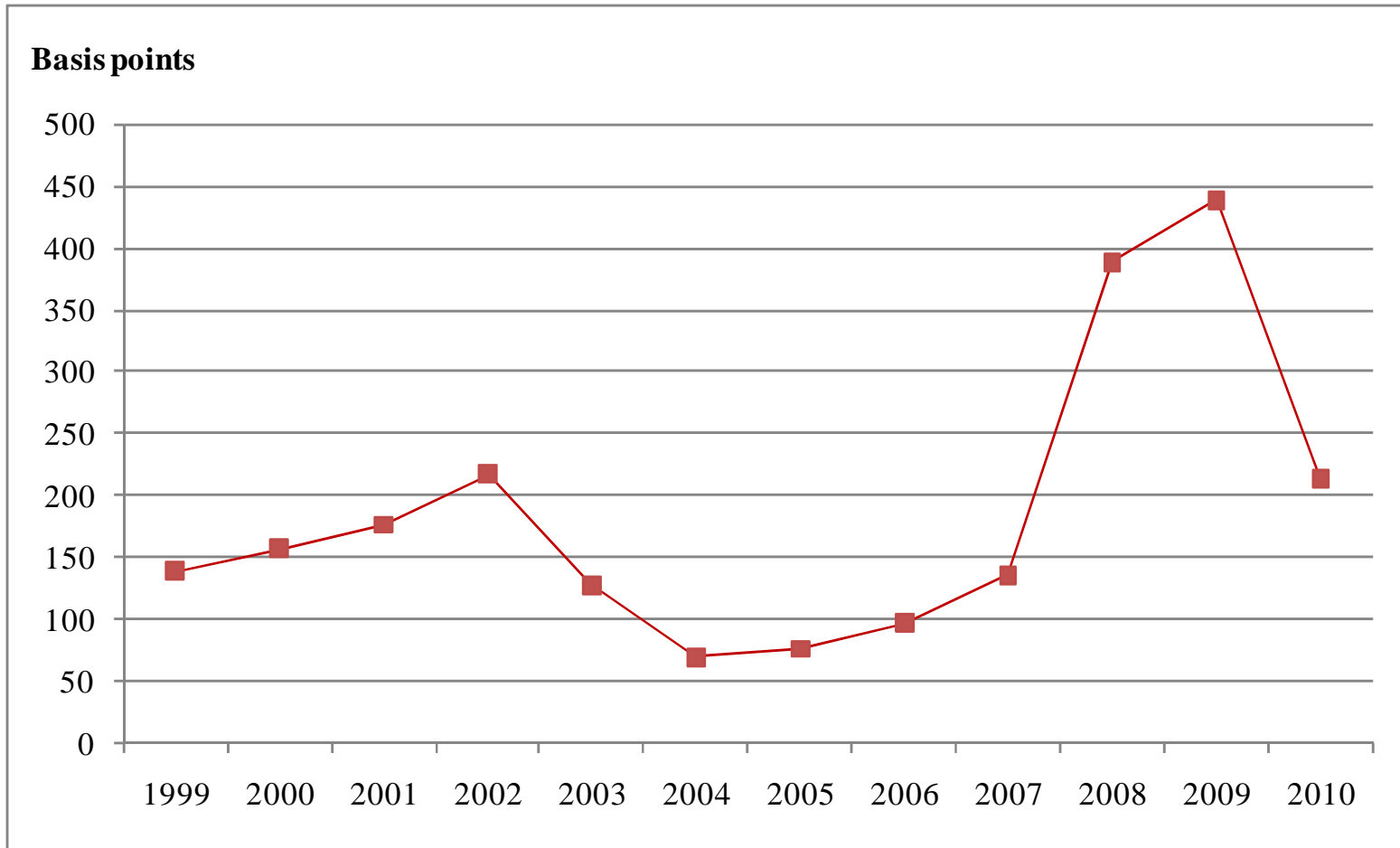
$$\Rightarrow r_{i,t} - r^*_t = \alpha_t \theta_t$$

Determinants of sovereign default:

$$\theta_{i,t} = \xi (E_t (X_{i,t+1}), E_t(B_{i,t+1}), E_t(s_{i,t+1}), c_i)$$

Thus: $r_{i,t} - r^*_t = f(\alpha_t, E_t(X_{i,t+1}), B_{i,t}, s_{i,t}, E_t(s_{i,t+1}), c_i)$

Aggregate risk: spread between low grade US corporate and government bonds



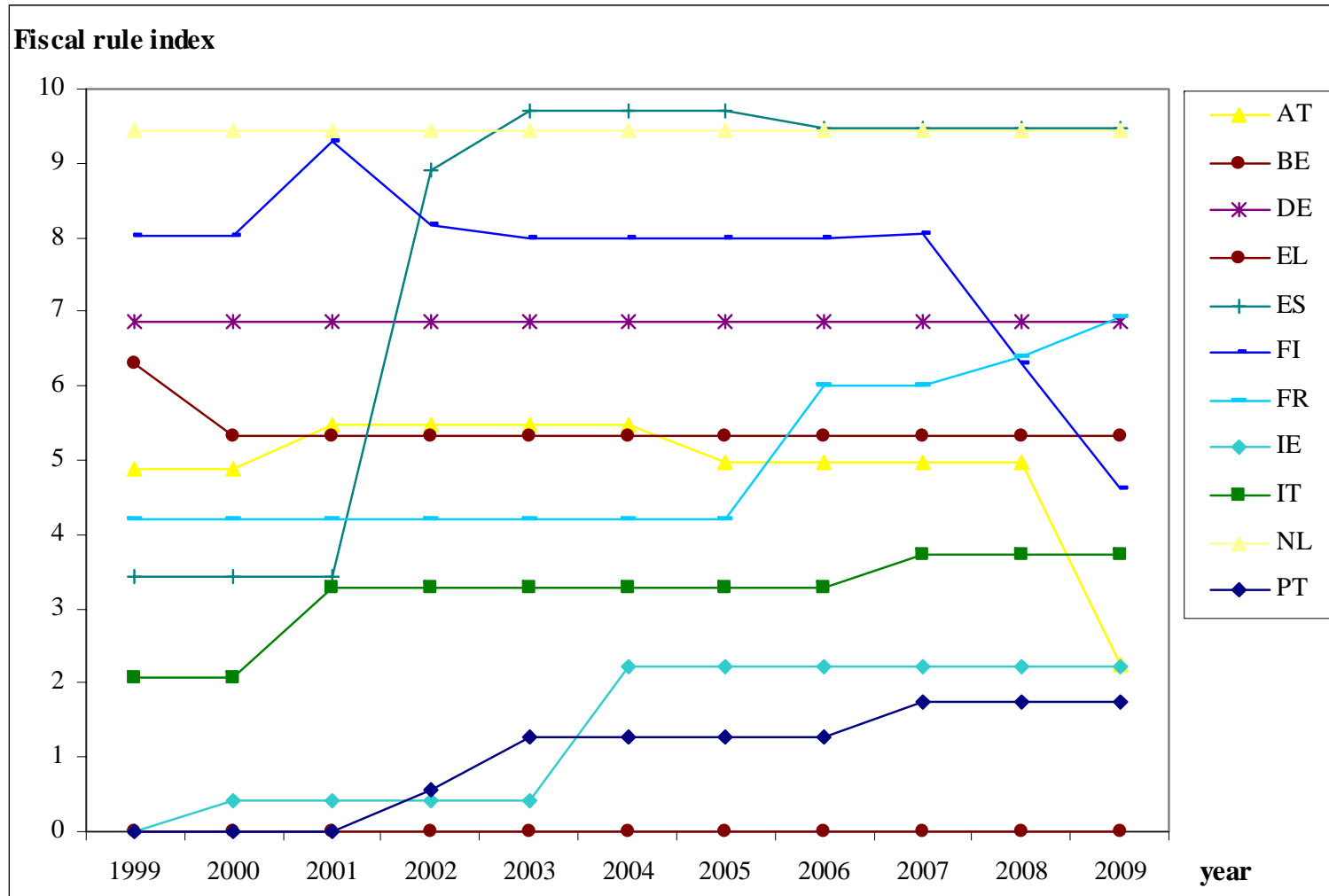


Rule no.	Country	Type	Sector	Target/constraint	Description	Accounting system	Time frame (years)	Statutory base	Monitoring body	Enforcement body	Non-compliance actions
1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	1.11	1.12
1011	AT	BBR	CG, RG, LG	Budget balance as % of GDP	Deficit targets for the CG, RG (Länder), and LG contained in a National Stability Pact within a multiannual budgetary setting.	ESA	2
1012	AT	BBR	CG, RG, LG	Budget balance as % of GDP	Deficit targets for the CG, RG (Länder), and LG contained in a National Stability Pact within a multiannual budgetary setting.	ESA	4
1013	AT	BBR	CG, RG, LG	Budget balance as % of GDP	Deficit targets for the CG, RG (Länder), and LG contained in a National Stability Pact within a multiannual budgetary setting.	ESA	4	L	GS	GS	Possibility of sanctions
2011	BE	ER	CG	Real expenditure growth rate	Real growth of primary expenditure for CG ought to be equal or lower than 0%.	BA	4	CA	IND, NP	GS	No pre-defined action
2021	BE	RR	CG	Growth of revenues in relation to GDP growth	Growth of fiscal revenues has to be in line with GDP growth (both in nominal terms).	BA	4	CA	No body	MF, GS	No pre-defined action

The fiscal rule index

- ✓ Dimensions
 - legal base
 - room for setting/revising objectives
 - nature of monitoring/enforcement body
 - enforcement mechanisms
 - media visibility
- ✓ Aggregation using random weights
- ✓ Decreasing benefit from multiple rules
- ✓ Adjusted to coverage of general government finance

The fiscal rule index in 11 euro area members



Empirical approach

Estimating equation

$$\begin{aligned} r_{i,t} = & \beta_1 risk_t + \beta_2 bas_{i,t} + \beta_3 risk_t bas_{i,t} + \\ & + \beta_4 fgdp_{i,t} + \beta_5 risk_t fgdp_{i,t} + \\ & + \beta_6 debt_{i,t} + \beta_7 risk_t debt_{i,t} + \\ & + \beta_8 bal_{i,t} + \beta_9 risk_t bal_{i,t} + \\ & + \beta_{10} fri_{i,t} + \beta_{11} risk_t fri_{i,t} + c_i + u_{i,t} \end{aligned}$$

Issues

- ✓ control for liquidity risk
- ✓ endogeneity
- ✓ annual data
- ✓ separated impact of *fri* dimensions

Data

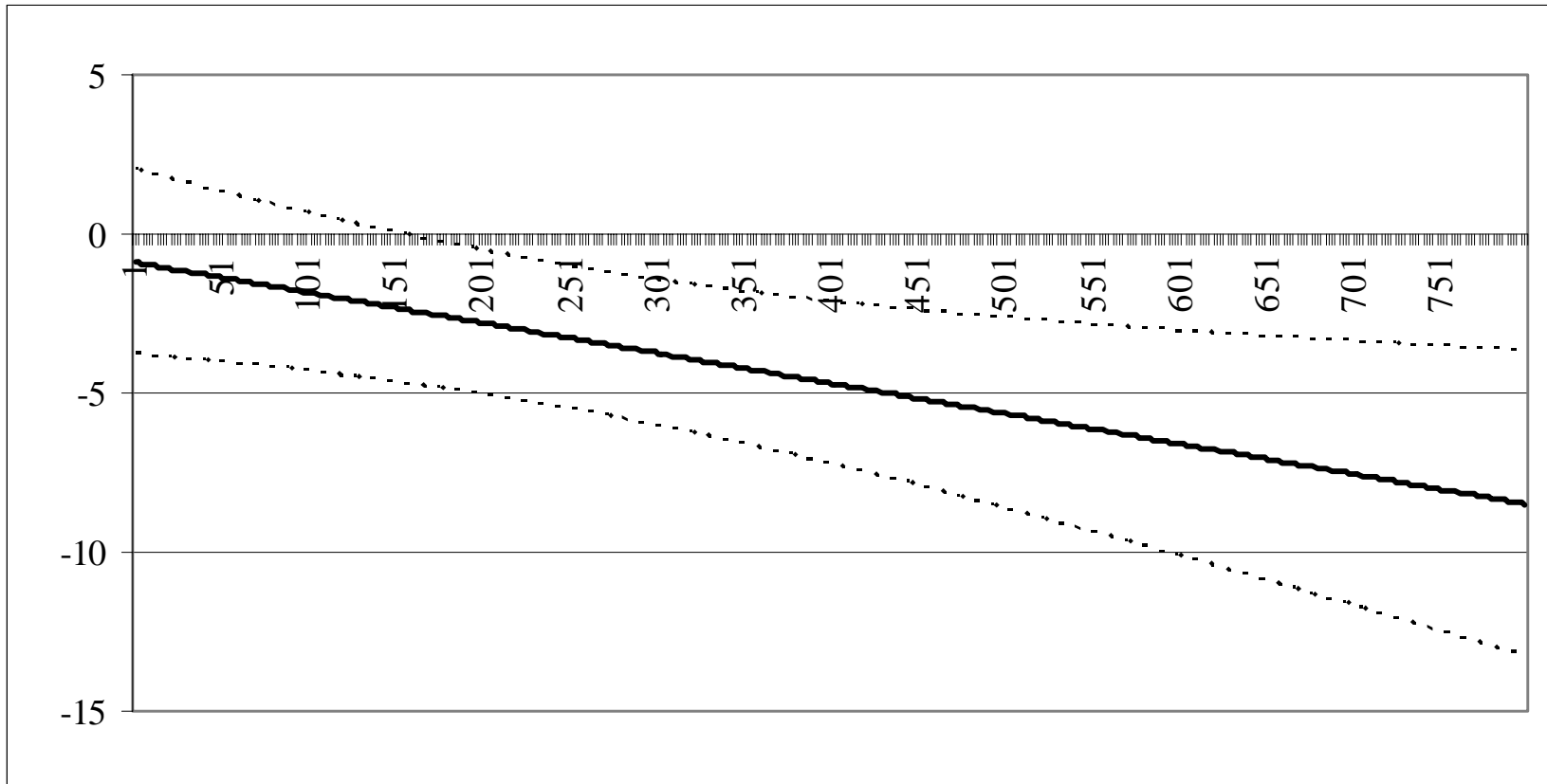
Bloomberg, EuroMTS, Ameco

Estimation results

<i>uscorp</i>	0.19 *** (0.02)	0.14 *** (0.02)	0.08 *** (0.02)	0.08 *** (0.01)	0.07 (0.04)	0.08 *** (0.02)	0.06 ** (0.02)	0.07 *** (0.02)	0.05 ** (0.02)
FRI		4.37 *** (1.59)	3.90 *** (1.32)	-0.88 (1.48)	5.58 (3.54)	-1.14 (3.05)	-10.22 *** (3.19)	-0.48 (2.93)	-9.32 *** (3.19)
<i>uscorp</i> *FRI		-0.02 *** (0.00)	-0.02 *** (0.00)	-0.01 ** (0.00)	-0.02 ** (0.01)	-0.02 *** (0.00)	-0.004 (0.005)	-0.02 *** (0.00)	-0.01 (0.01)
balance			-4.04 *** (0.61)	0.69 (1.22)	-5.27 *** (1.61)	-4.29 *** (1.03)	-0.93 (1.62)	-3.64 *** (1.02)	-1.35 (1.62)
debt		0.81 *** (0.22)	0.75 *** (0.18)	0.57 *** (0.18)	1.57 *** (0.47)	1.63 *** (0.45)	1.03 ** (0.40)	1.40 *** (0.44)	0.97 ** (0.39)
<i>uscorp</i> *balance				-0.02 *** (0.00)			-0.02 *** (0.01)		-0.01 ** (0.01)
<i>uscorp</i> *debt				0.001 (0.001)			0.002 ** (0.001)		0.002 ** (0.001)
bid-ask spread						-13.50 (42.29)	14.15 (38.20)	-357.18 ** (148.26)	-193.61 (134.16)
<i>uscorp</i> *bid-ask spread								0.882 ** (0.366)	0.542 (0.336)
N	107	107	107	107	117	69	69	69	69
r2	0.60	0.73	0.82	0.86	0.42	0.86	0.91	0.87	0.91

Estimation with panel fixed effects. Standard errors in parentheses. Time period: 1999-2009 (107 observations), 1999-2010 (117 observations), 2003-2009 (69 observations).

Marginal effect of fiscal rules on sovereign bond spreads





DG ECFIN

Which component of fiscal rules?

Rules & risk

<i>uscorp</i>	0.08 *** 0.02	0.06 *** 0.02	0.11 *** 0.01	0.11 *** 0.01	0.13 *** 0.01	0.00 0.03	-0.04 0.08
FRI	3.90 *** 1.32						
<i>uscorp</i> *FRI	-0.02 *** 0.00						
FRI1		3.46 ** 1.40					-10.08 ** 4.85
<i>uscorp</i> *FRI1		-0.02 *** 0.00					-0.03 * 0.02
FRI2			4.06 *** 1.23				5.17 3.88
<i>uscorp</i> *FRI2			-0.02 *** 0.00				-0.02 0.02
FRI3				3.24 *** 1.09			3.39 4.45
<i>uscorp</i> *FRI3				-0.02 *** 0.00			0.03 0.02
FRI4					3.41 *** 1.24		0.65 2.67
<i>uscorp</i> *FRI4					-0.02 *** 0.00		0.01 0.01
FRI5						3.96 *** 1.32	4.78 4.70
<i>uscorp</i> *FRI5						-0.02 *** 0.00	-0.01 0.01
balance	-4.04 *** 0.61	-4.18 *** 0.61	-4.02 *** 0.61	-4.09 *** 0.61	-3.90 *** 0.65	-4.08 *** 0.61	-4.29 *** 0.62
debt	0.75 *** 0.18	0.72 *** 0.18	0.73 *** 0.18	0.73 *** 0.19	0.79 *** 0.19	0.84 *** 0.18	0.88 *** 0.21
N	107	107	107	107	107	107	107
R ²	0.82	0.81	0.82	0.82	0.80	0.81	0.84
marginal effect of FRI _i							
at <i>uscorp</i> =500	-6.15	-7.12	-4.79	-4.73	-5.72	-5.45	-24.71

Robustness checks

- ✓ Quarterly frequency
- ✓ Measurement of aggregate risk: VIX
- ✓ Dataset with longer and better bid-ask spread series (Gerlach et al. (2010))
- ✓ Sample: year < 2009; exclude IE

Conclusion

- ✓ National fiscal rules reduce sovereign spreads in times of higher risk aversion
 - economically and statistically significant
 - effect of up to 100-200 bps
- ✓ Important characteristics of rules-based frameworks
 - legal base of rules
 - stringency of enforcement
- ✓ Possible way for high-risk countries to regain market confidence