Lessons From/For The European Crisis

Paolo Manasse
University of Bologna

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Overview

1. The Spread of Epidemics
2. Sources of Vulnerabilities in Europe
3. Interdependence vs Contagion
4. Greece vs Italy
5. European Institutions: Good Enough?

1. The Spread of Epidemics:

Black Death Epidemic (1346-1351)

- Greatest catastrophe in human history: about 30% of european population died in the first half of the 14° Century (Great Plague, Great Pestilence)
- Battista Severgnini and Lars Borner, 2011: Data from city archives reconstructing spread of the disease

The black death routes

From Mongolia to a Costantinopoles ed a Alexandria in Egypt towards the Balcans.

Then southbound, to Cairo, and northbound along the Silk Way to Damascus, Aleppus (1348) e Baghdad (1349).

Next to Italy (!). Messina (Sicily), North Africa (Tunisis Fez) e main ports of the Mediterranean sea (Pisa, Genova, Marseile, Barcellona, Valencia, Ragusa e Venezia). Italy, with Pisa e Venice, became the major hub. France, Spain, Portugal, and northbound to London, Amsterdam, Bergen, Oslo,Copenaghen.

1. The Spread of Epidemics

- The epidemic spread along the routes of international trade
- Arguably, the present financial spread through financial and trade links
- these, now as then, often coincide

2. Sources of Vulnerabilities

Network Analysis

Errico & Massara, 2011

- The rank of trade and financial interconnectedness coincide: Trade hubs = financial hubs
- **EU**, China, US, Japan feature high
- Even small ones Netherlands, Belgium

- Large integration means large international VULNERABILITY

Table 2. Composite Index Ranking: the Top 25 Systemic Jurisdictions, 2010

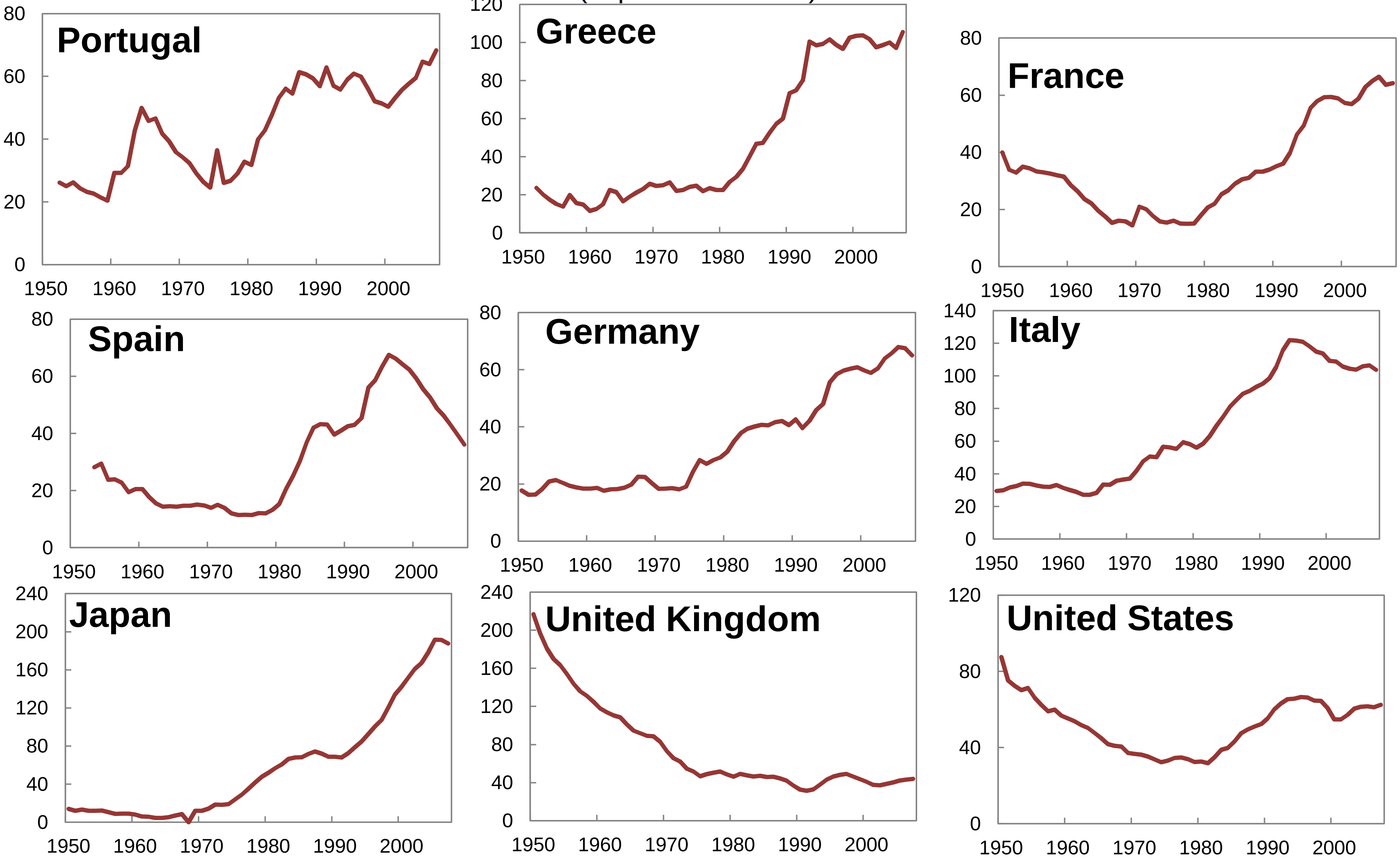
Systemic Trade Sector Rank	Jurisdiction	Systemic Financial Sector Rank 1/	Jurisdiction
1	China , P.R. Mainland	1	United Kingdom
2	Germany	2	Germany
3	Netherlands	3	United States
4	Italy	4	France
5	France	5	Japan
6	United States	6	Italy
7	Korea, Republic of	7	Netherlands
8	Belgium	8	Spain
9	Japan	9	Canada
10	United Kingdom	10	Switzerland
11	China , P.R. Hong Kon	11	China , P.R. Mainland
12	Canada	12	Belgium
13	Spain	13	Australia
14	India	14	India
15	Malaysia	15	Ireland
16	Switzerland	16	China , P.R. Hong Kong
17	Thailand	17	Brazil
18	Singapore	18	Russian Federation
19	Russian Federation	19	Korea, Republic of
20	Brazil	20	Austria
21	Australia	21	Luxembourg
22	Sweden	22	Sweden
23	Turkey	23	Singapore
24	Austria	24	Turkey
25	Indonesia	25	Mexico

Sources: IMF DOTS Database and IMF staff estimates.

1/ As identified in "Integrating Stability Assessments Under the Financial Sector Assessment Program into Article IV Surveillance: Background Material"

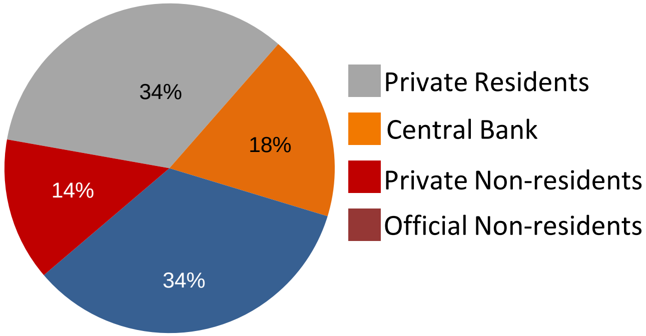
2. Sources of Vulnerabilities: General Government Gross Debt 1950-2007 (Imf Fiscal Monitor)

(In percent of GDP)

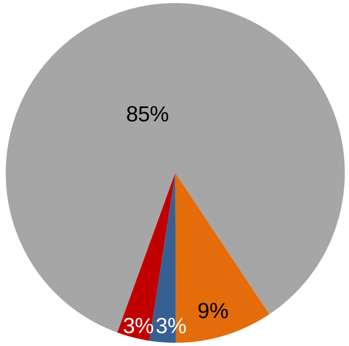


2. Sources of Vulnerability: Holders of Public Debt (IMF , fiscal monitor 2011)

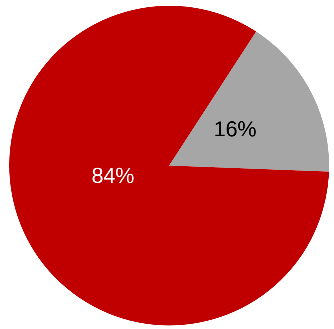
United States Treasury Securities



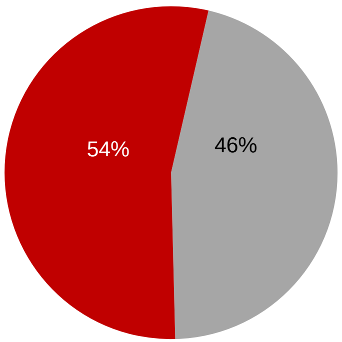
Japan Central Government Bonds



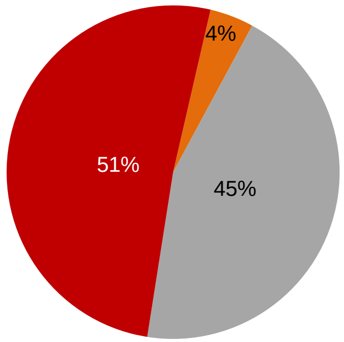
Ireland Central Government Bonds



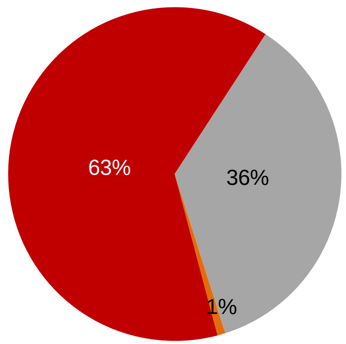
France Central Government Securities



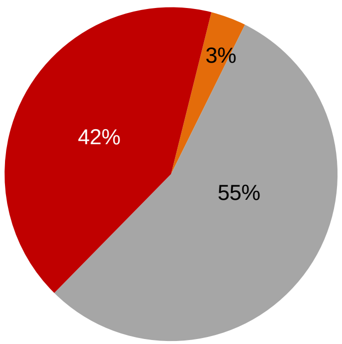
Italy General Government Securities



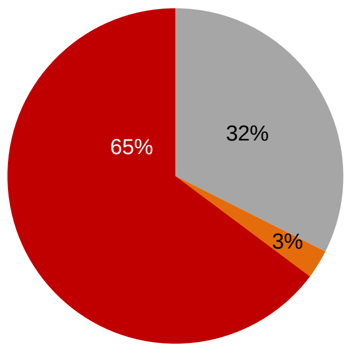
Portugal General Government Debt



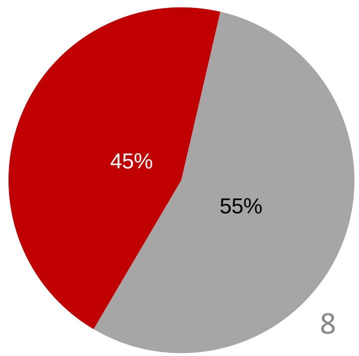
Belgium Gross Government Debt



Greece Central Government Marketable Debt

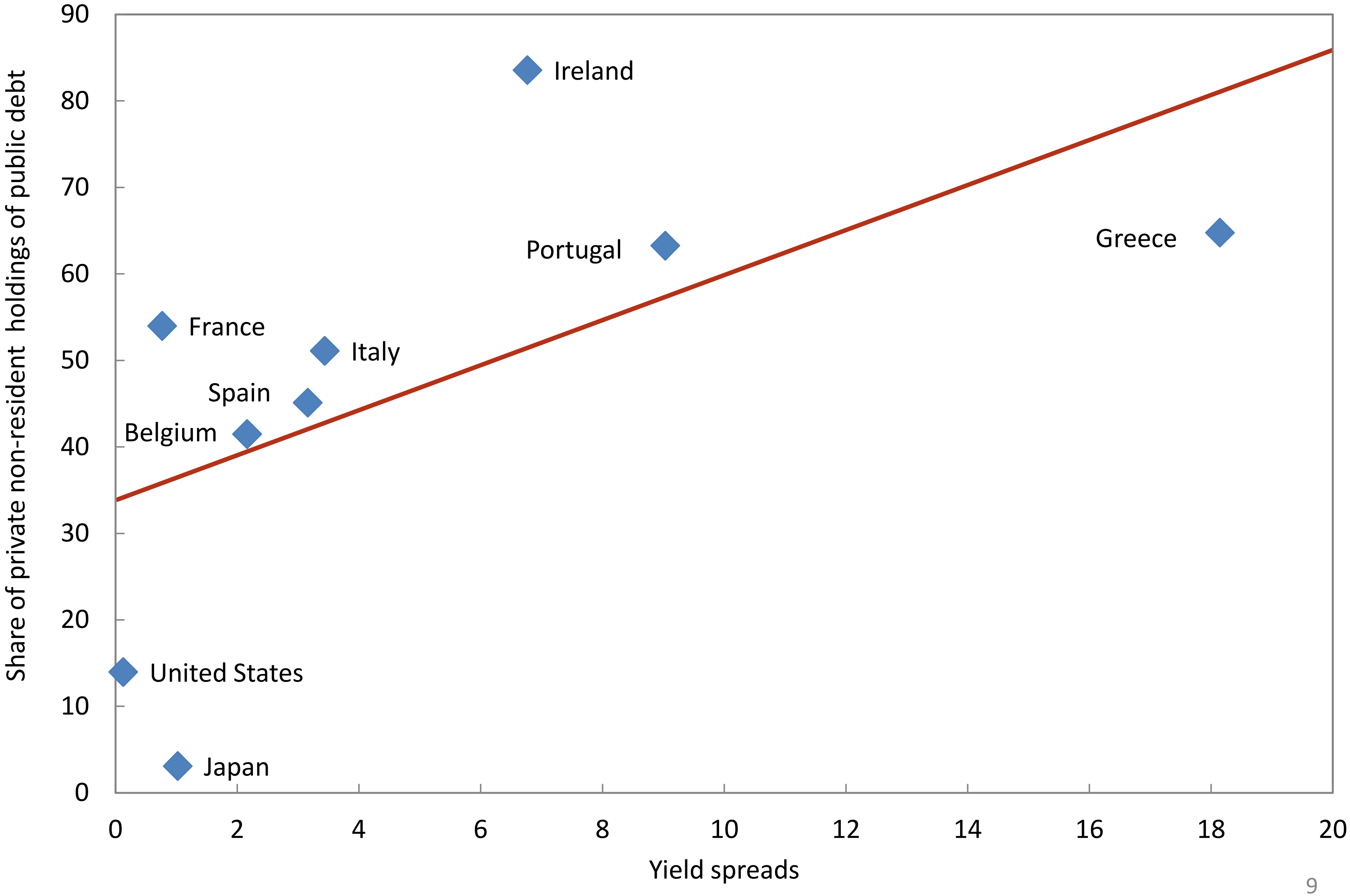


Spain Central Government Securities



Note: For Ireland, France, Italy, Portugal, Greece and Spain: Private non-resident, includes ECB.

2. Sources of Vulnerabiliy Private Non-residents Holders of Debt vs. Yield Spreads (IMF, 2011)



2. Sources of Vulnerability: Competitiveness (Masori, 2011)

Fiscal balance		CA balance	
Country	2000-07 ave	Country	2000-07 ave
Greece	-5.4%	Portugal	-9.4%
Portugal	-3.7%	Greece	-8.4%
Italy	-2.9%	Spain	-5.8%
France	-2.7%	Ireland	-1.8%
Germany	-2.2%	Italy	-1.3%
Austria	-1.6%	France	0.4%
Netherlands	-0.6%	Austria	1.6%
Belgium	-0.4%	Belgium	3.0%
Spain	0.3%	Germany	3.2%
Ireland	1.5%	Netherlands	5.4%
Luxembourg	2.3%	Finland	5.9%
Finland	4.1%	Luxembourg	10.6%

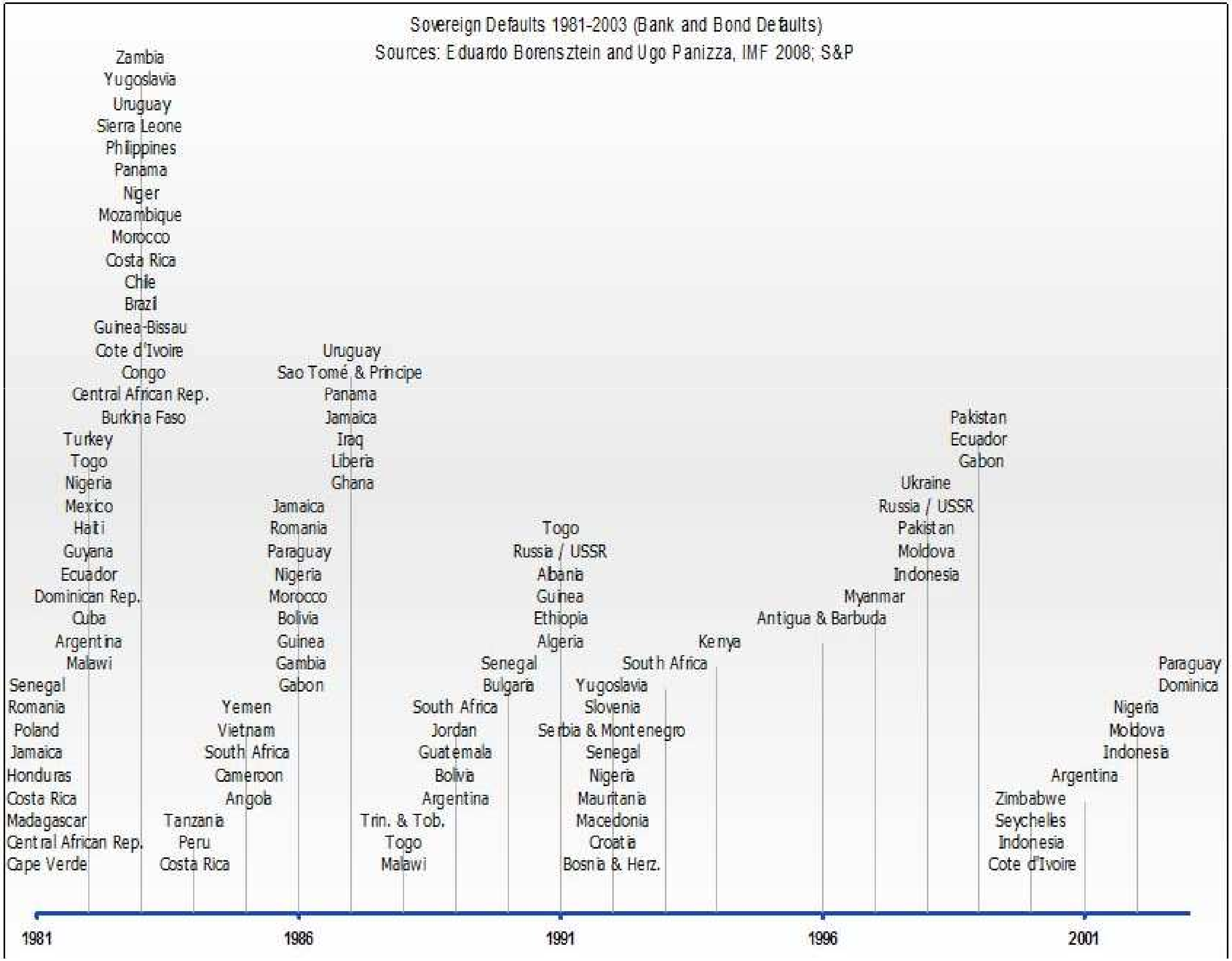
Implications:

- Euro
- ECB Monetary Policy

3. Interdependence vs Contagion

1. Crisis episodes are clustered in waves and time (King, Wadwhani, 1990)
2. Literature: Contagion is defined as an "abnormal" increase in the domestic response to financial and trade shocks (propagation mechanism), Rigobon, 2001
3. Which Sources of Contagion?

3. Contagion: Waves of Soveregin Debt Crises



3 Contagion vs Interdependence: What sources?

Interdependence (β) vs Contagion (γ), between stock markets during 2007-9 Bekaert, Ehrmann, Fratzscher, Mehl, Nber Wp., 2011

$$R_{i,t} = E_{t-1}[R_{i,t}] + \beta_{i,t}' F_t + \eta_{i,t-1} CR_t + e_{i,t} \tag{1}$$

$$\beta_{i,t} = \beta_{i,0} + \beta_1' Z_{i,t-k} + \gamma_{i,t-1} CR_t \tag{2}$$

$$\gamma_{i,t-1} = \gamma_{i,0} + \gamma_1' Z_{i,t-k} \tag{3}$$

$$F_t' = [R_t^U, R_t^G, R_t^D]$$

Ri,t =excess return of portfolio i during week t (the return less the three month US T-bill rate in weekly units), *Et-1[Ri,t] is the expected excess return, measured as a linear function of the lagged* excess return and the local dividend yield, *Ft is the vector of the three observable factors, CRt a crisis* dummy, *Zi,t a vector of exogenous control variables,*

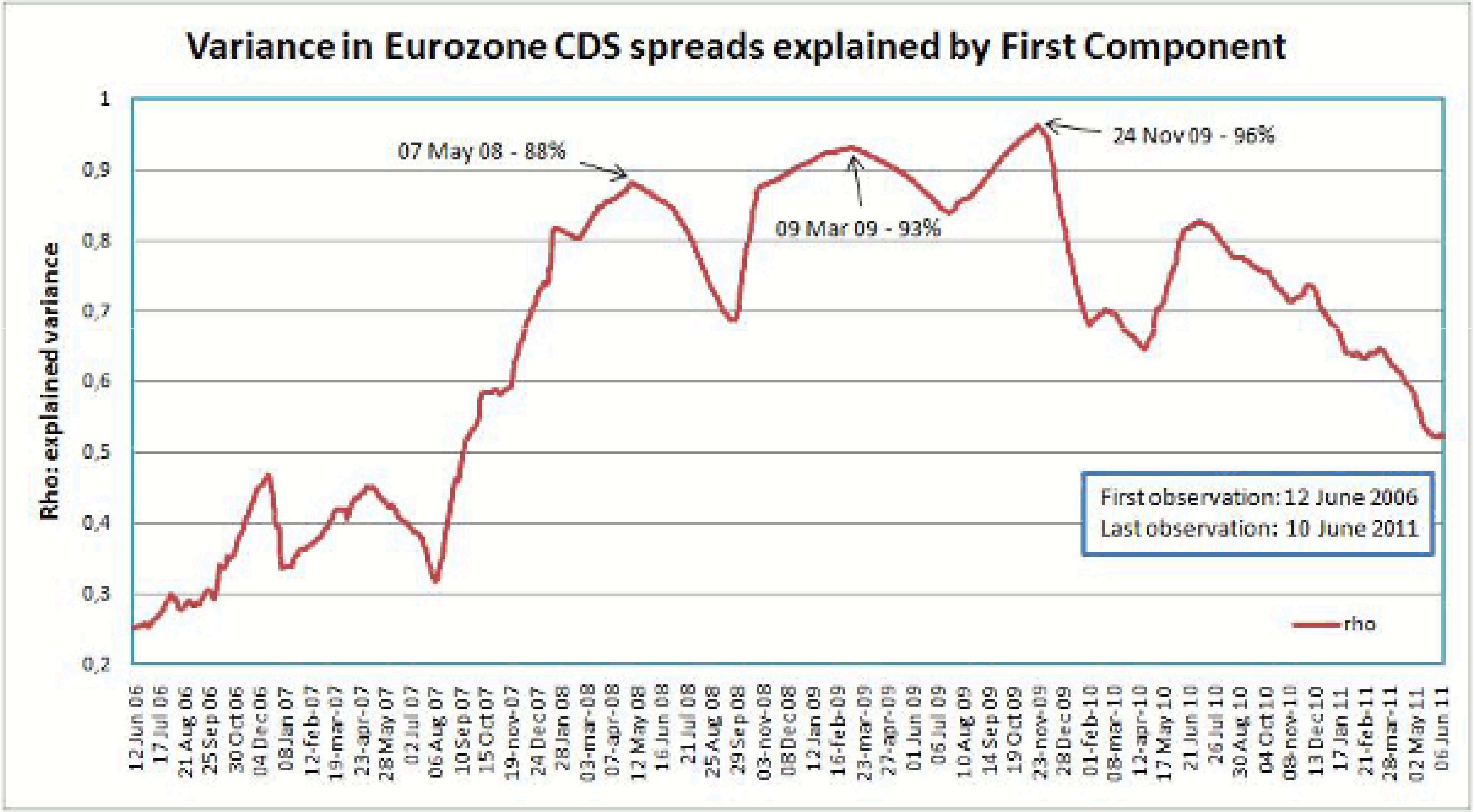
3. Interdependence vs Contagion: Wake up Call

Bekaert, Ehrmann, Fratzscher, Mehl, Nber.2011

1. Contagion during the 2007-09 financial crisis was mostly domestic in nature (except Emerging Europe).
2. Differences in vulnerabilities (trade openness, or financial depth) do not explain contagion
3. **Countries with poor macroeconomic fundamentals, high sovereign risk and poor institutions experienced by far the largest equity market declines and contagion**. (FX reserves, the current account, sovereign rating)

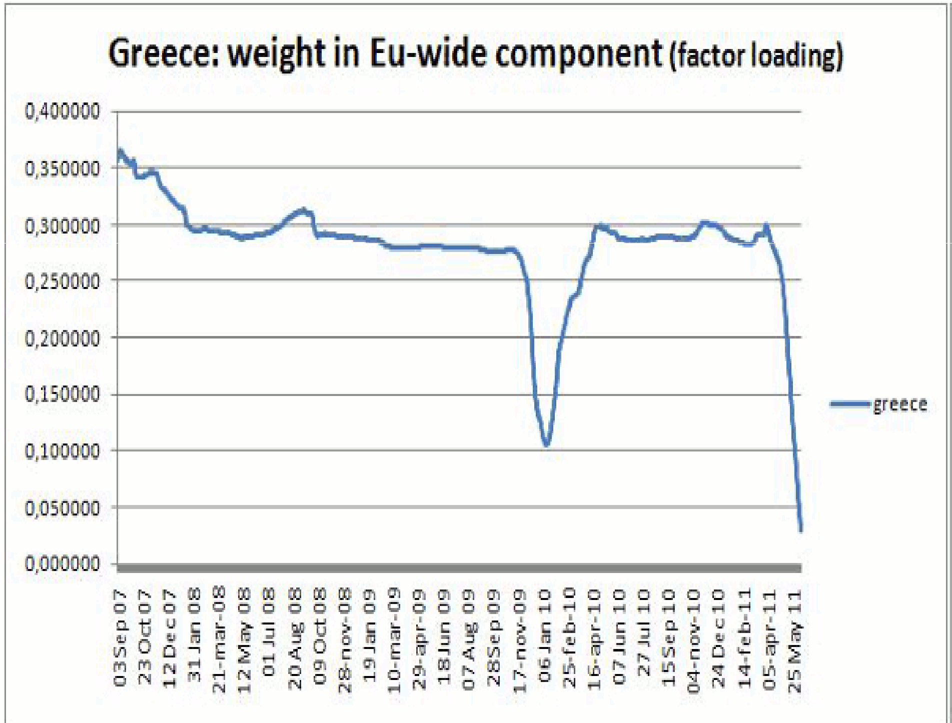
Wake-up call: macro-fundamentals matter so much during a crisis cross-country differences in government policy may explain the relative exposure to the crisis.

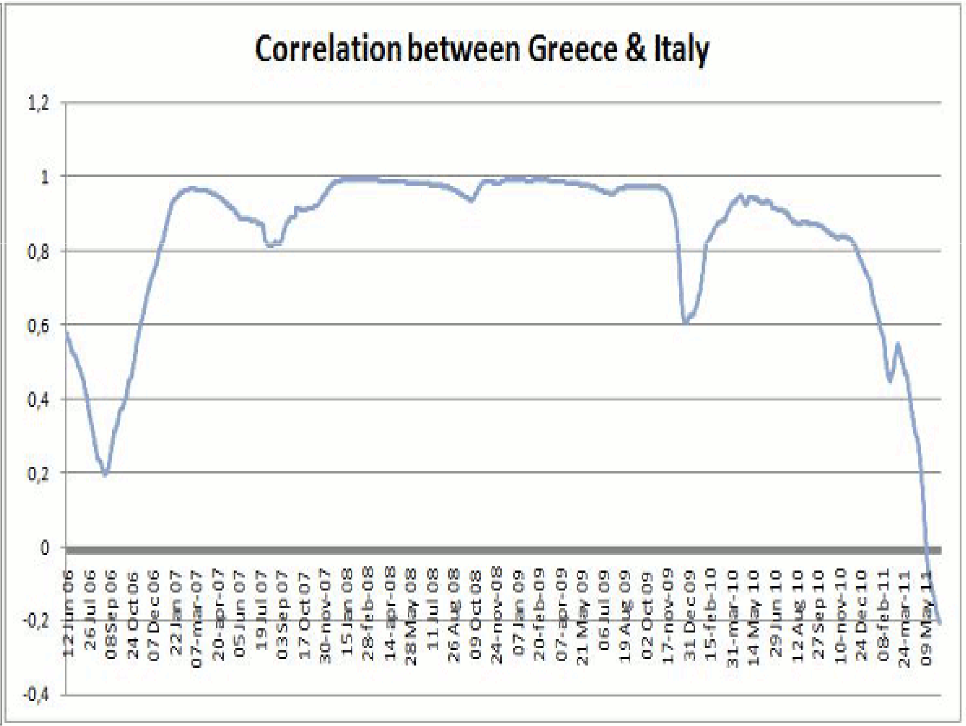
3. Contagion in the Eurozone
Manasse &Trigilia, work in progress, voxeu.org 2011



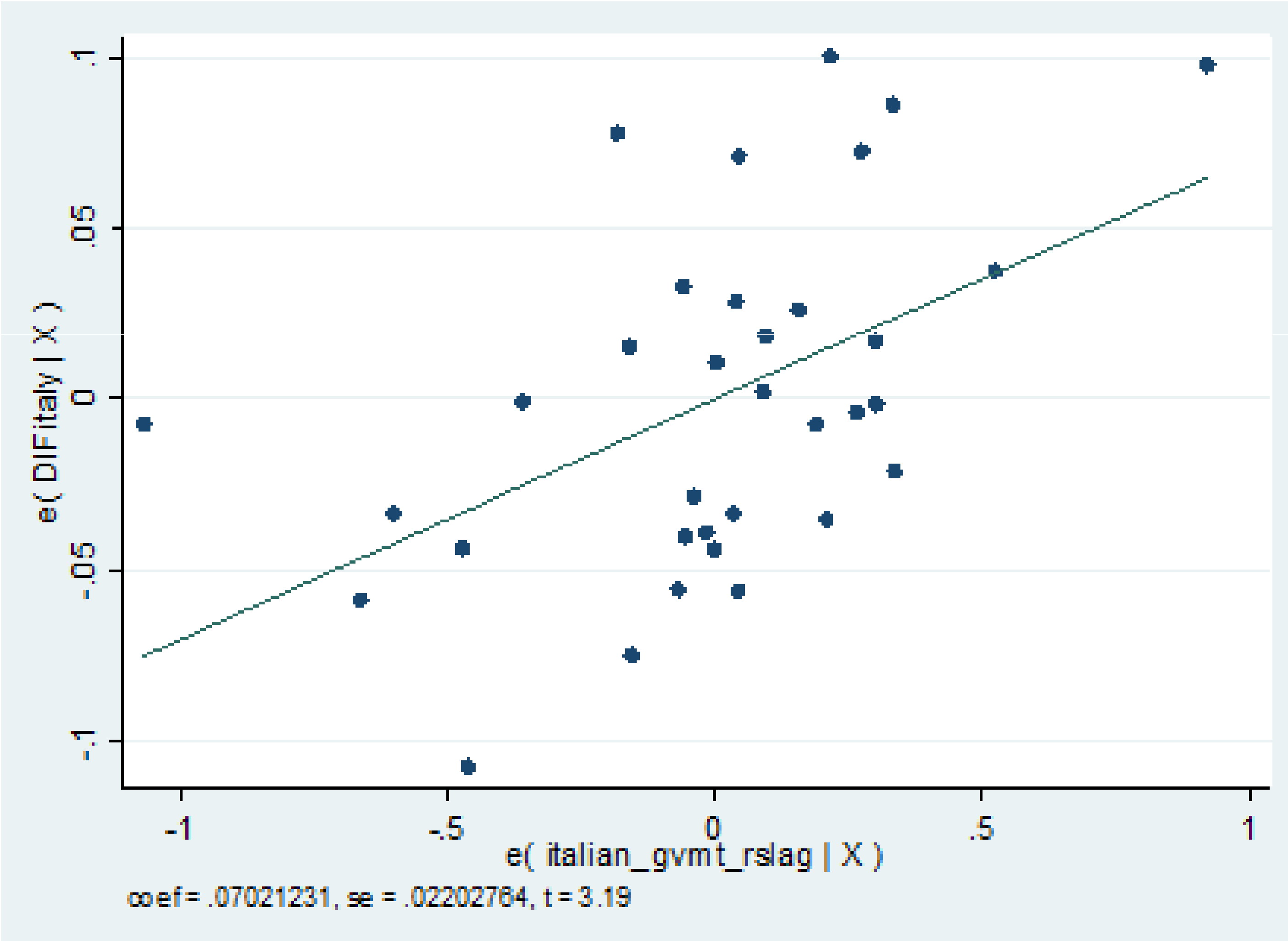
4. Greece and Italy, a case of contagion? No

From April 2011 contagion from Greece to EZ and Italy has fallen
Domestic Issues more relevant



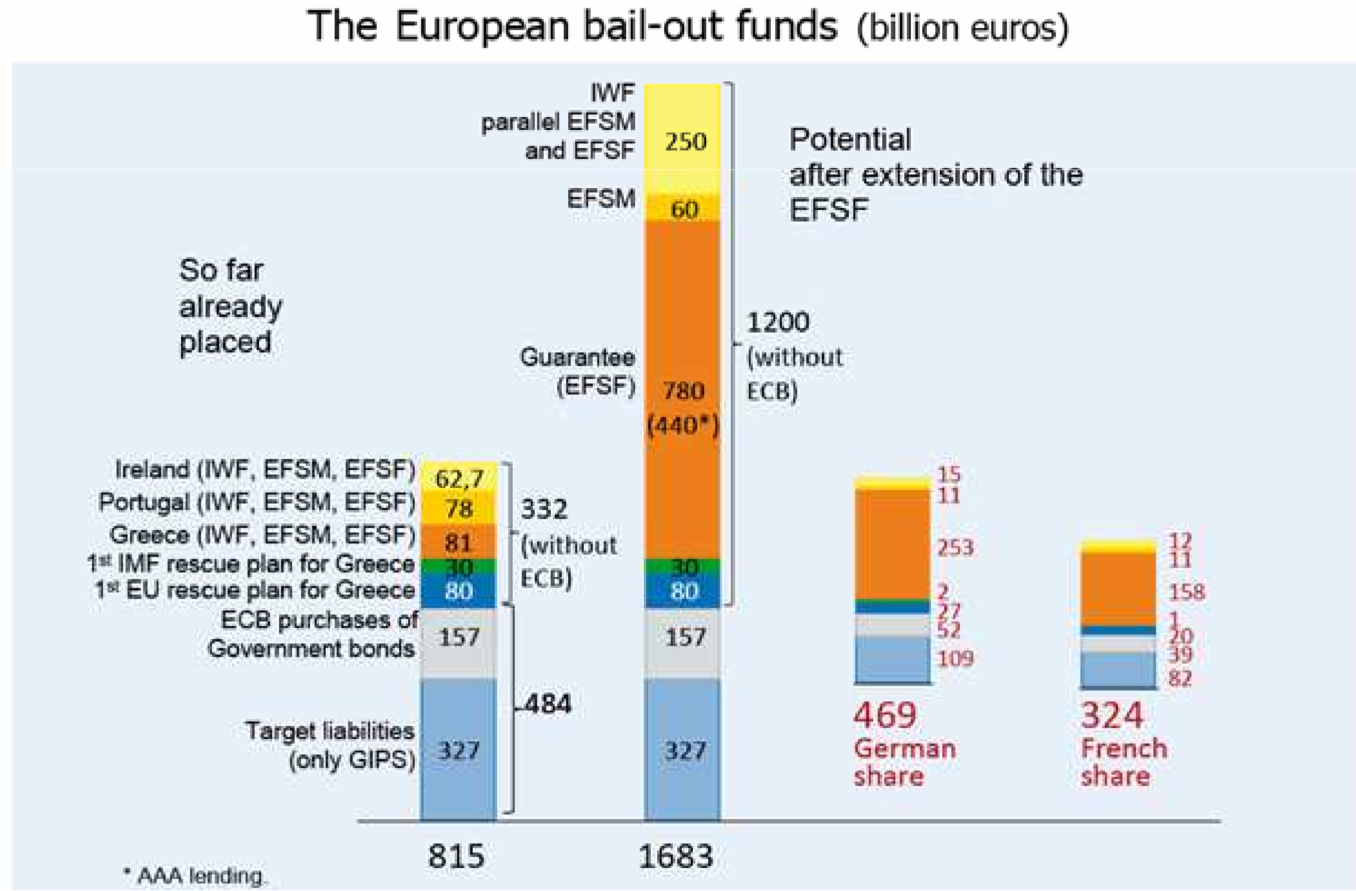


Political Instability and Loss of Credibility (Manasse & Trigilia, 2011 voxeu.org) in Italy



5.EU Reforms and Institutions: good enough?

1. EFSF/ESM: too little/too much
   a) €3000 b required but already Germany exposed for about 469b (9.5%GDP)
   b) Veto power/National Parliaments
   c) Call-up mechanism > contagion (if also Italy defaulted Germany would rise above b/y =100%, loose AAA)



2. Eurobonds

- Issue common obbligation (at least below 60% of GDP), lower rates, liquid instruments
- B has value as long as = PDV of future budget surplus: whose surplus?
- Requires loss of sovereignty of deficit countries/unified budget/political inistitutions

3.New SGP proposals

1. medium-term planning, fiscal rules, councils of independent advisors
2. (Adj/GDP)t = 1/20 [(B/Y)t – 60%)
3. Sanctions speeded up (0.2%)
4. vulnerability indicators (CA account, productivity growth) with sanctions
5. Punishment vs Incentives in good times (Manasse, Imf Staff Papers, 2006)

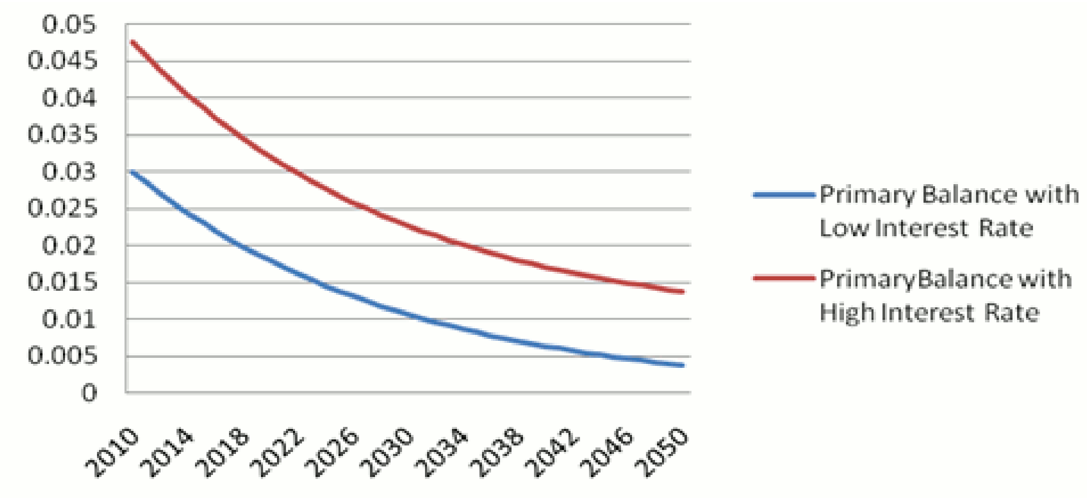
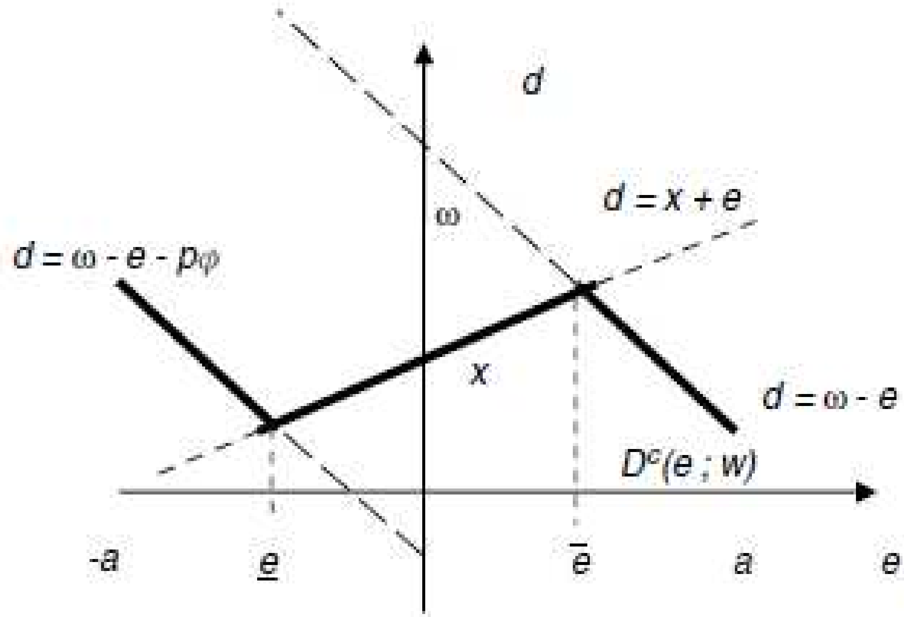


Figure 1. Optimal Fiscal Reaction Function with a Deficit Limit



Tentative Conclusions

1. Large trade and financial interdependence makes EU prone to diffusion of crisis (banks/sovereign)
2. Many of vulnerabilities were there long before the crisis stemming from lack of fiscal enforcements (debt) and lack of convergence in productivity growth (competitiveness). The crisis aggravated the existing problems
3. Contagion is different from vulnerability: more domestic factors
4. European Institutions: problems of design, but most of all political constraints
5. Key role of ECB: raise inflation target

EU banks cross country* exposure to sovereign debt of:

- Greece: 85.6b
- Portugal: 55.4b
- Ireland: 43.3b
- Italy: 99.9b
- Spain: 181b

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465.2b

* not counting domestic debt held by domestic banks, for ex. Italian banks hold about 630b (33%) out of 1900b of outstanting public debt

2. Sources of Vulnerability: Sovereign Bond Yield Spreads and Projected Real GDP Growth (Imf,2011)