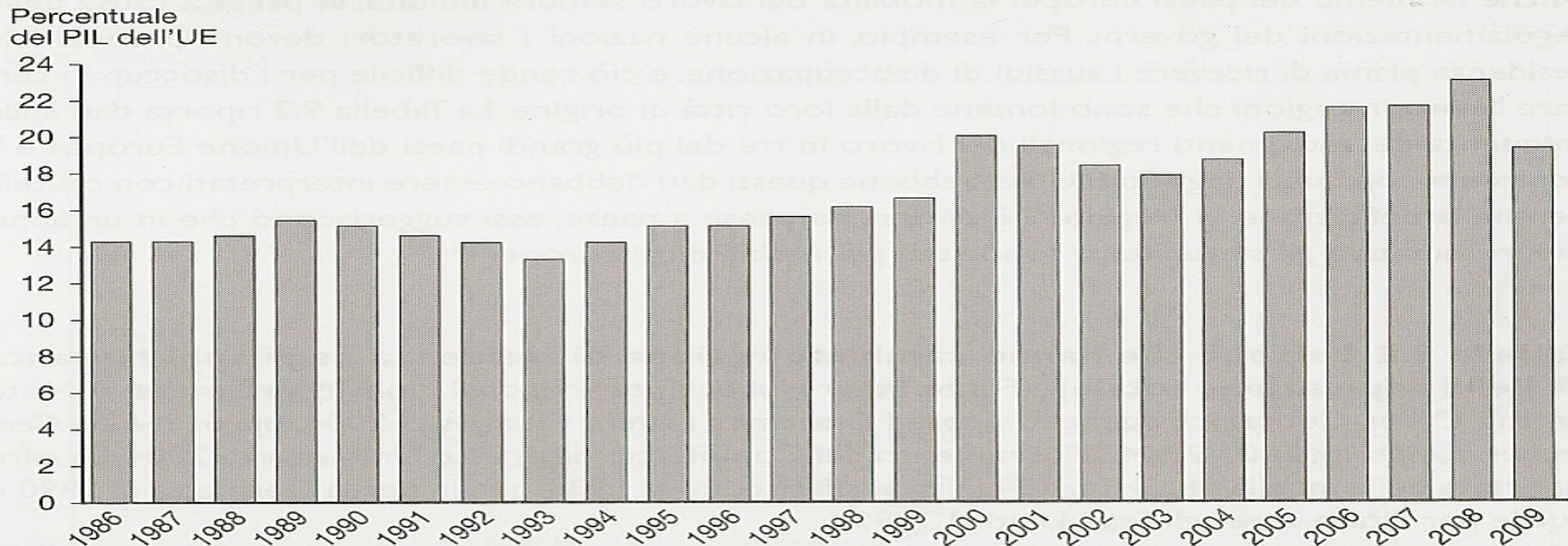


# Is Eurozone an Optimal Currency Area?

Dr. Alberto Botta

# Is Eurozone an Optimal Currency Area?

## Trade Relations:



**Figura 9.7 Commercio intra-UE in rapporto al PIL dell'UE.** Il commercio intra-UE è cresciuto dopo l'introduzione dell'euro all'inizio del 1999. Nella costruzione della figura, il volume di scambi di un paese dell'UE con gli altri membri è definito come la media delle sue importazioni ed esportazioni da e verso gli altri paesi dell'UE. Le cifre riportate sono calcolate dividendo i dati sul commercio totale intra-UE (per tutti i paesi membri) per il PIL dell'UE. (Fonte: OECD Statistical Yearbook ed Eurostat.)



# Is Eurozone an Optimal Currency Area?

## Factor Mobility: Labour

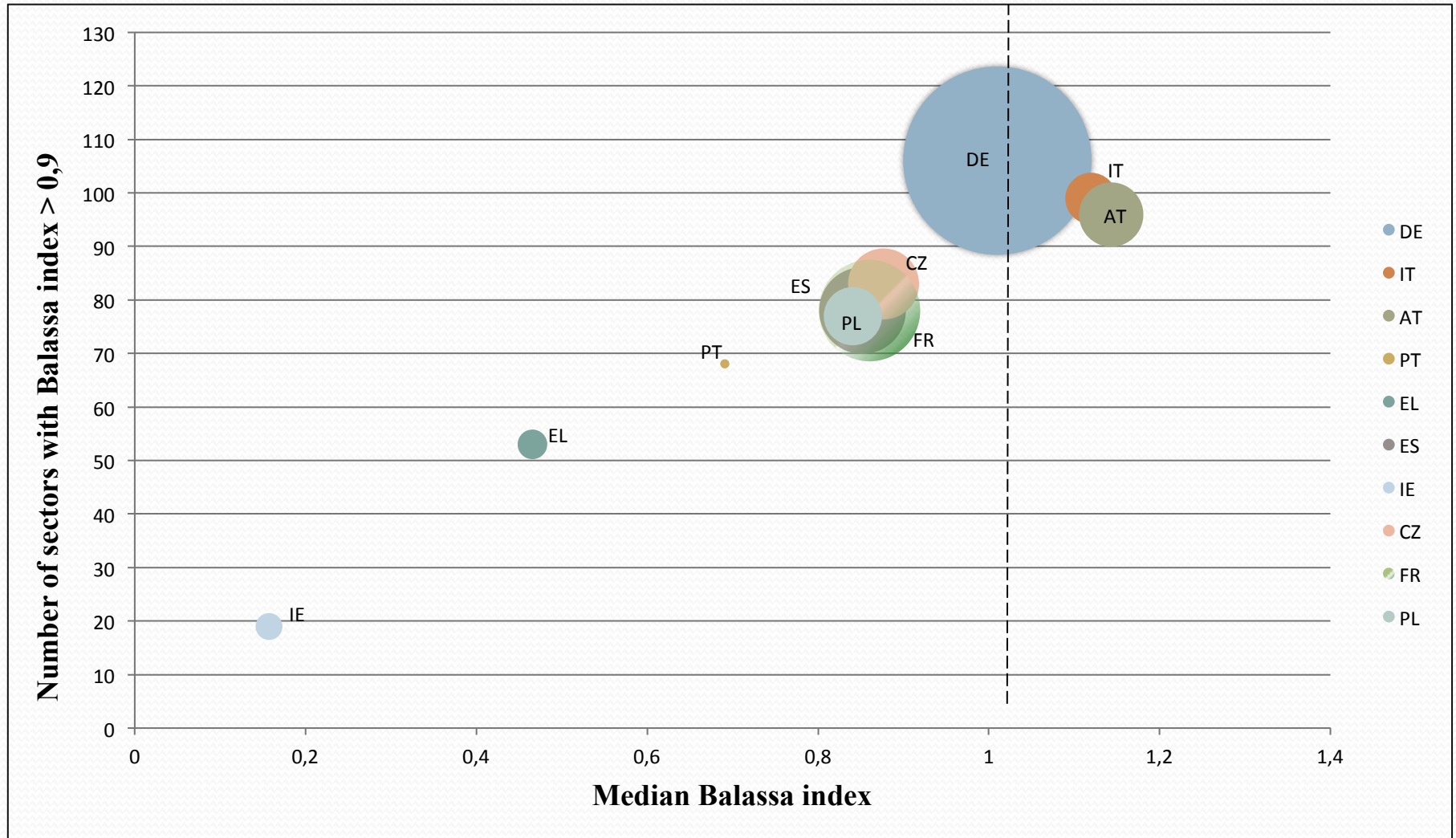
**Tabella 9.2 Persone che hanno cambiato regione di residenza negli anni Novanta (% della popolazione totale).** (Fonte: Peter Huber, “Inter-regional Mobility in Europe: A Note on the Cross-Country Evidence”, *Applied Economics Letters* 11, agosto 2004, pp. 619–624; *Geographical Mobility, 2003-2004*, Dipartimento del Commercio degli Stati Uniti, marzo 2004. Le cifre riportate nella tabella per il Regno Unito si riferiscono al 1996, quelle per la Germania al 1990 e quelle per l'Italia e per gli Stati Uniti al 1999.)

Germania	Italia	Regno Unito	Stati Uniti
1,1	0,5	1,7	3,1

Source: Krugman, Obstfeld, Melitz (2012)

# Is Eurozone an Optimal Currency Area?

## Diversification of Productive Structures<sup>(1)</sup>:



Source: Botta (2014b)

# Is Eurozone an Optimal Currency Area?

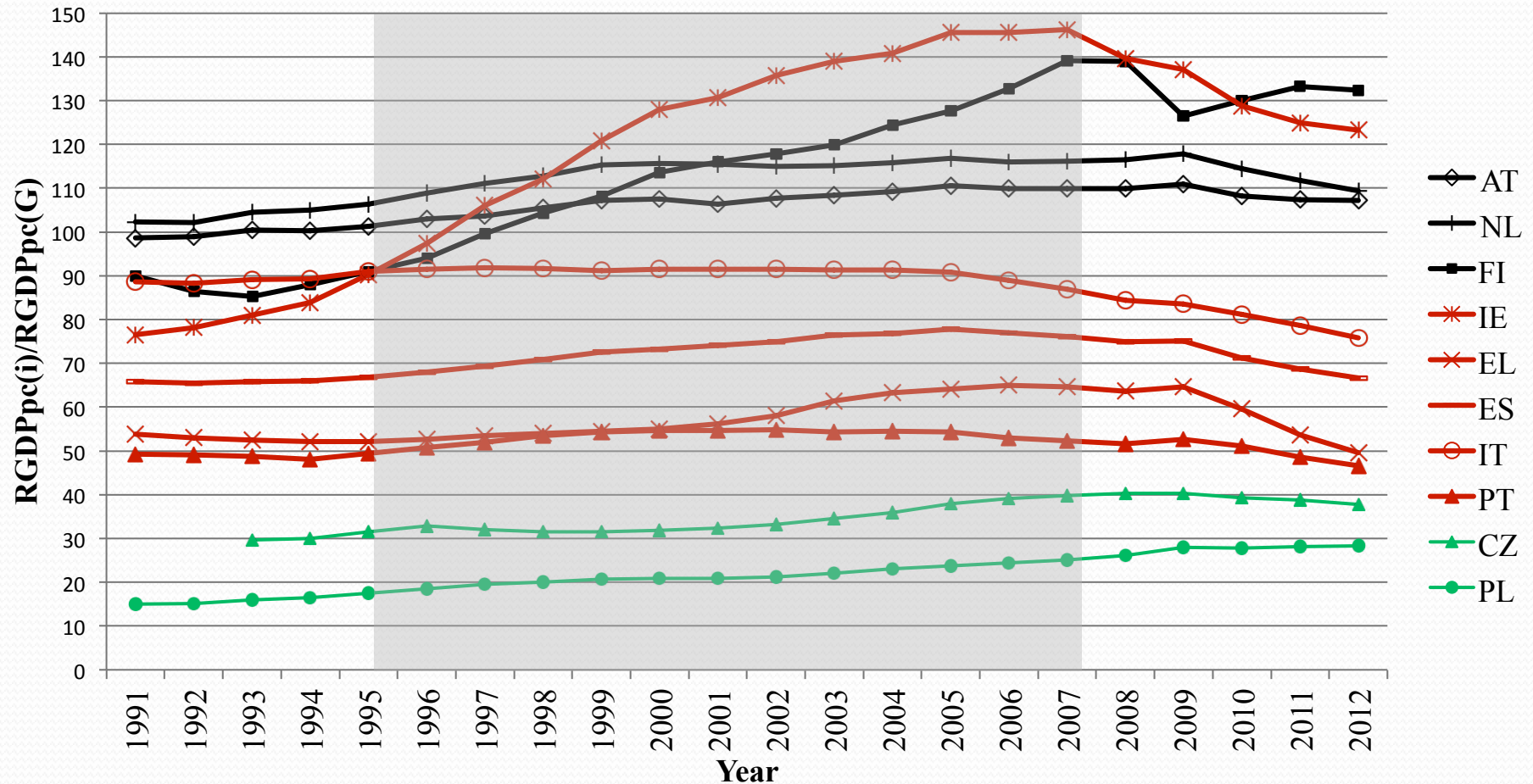
## Diversification of Productive Structures<sup>(2)</sup>:

	2006	2007	2008	2009	2010	2011	2012
<b>Dispersion in innovation performances (Theil index)</b>	0,034	0,033	0,028	0,030	0,026	0,029	0,031
<b>“Within-group” difference</b>	0,012	0,011	0,007	0,009	0,007	0,010	0,009
(percentage of total)	(34%)	(33,3%)	(25,5%)	(28,9%)	(26,6%)	(34,7%)	(30,9%)
<b>“Between-group” difference</b>	0,022	0,022	0,021	0,021	0,019	0,019	0,022
(percentage of total)	(66%)	(66,7%)	(74,5%)	(71,1%)	(73,4%)	(65,3%)	(69,1%)
	<b>2004-2008</b>			<b>2008-2012</b>			
<b>Beta convergence</b>	-0,54			0,33			
<b>Beta convergence (excl. Greece)</b>				-0,004			

Source: Botta (2014b)

# Is Eurozone an Optimal Currency Area?

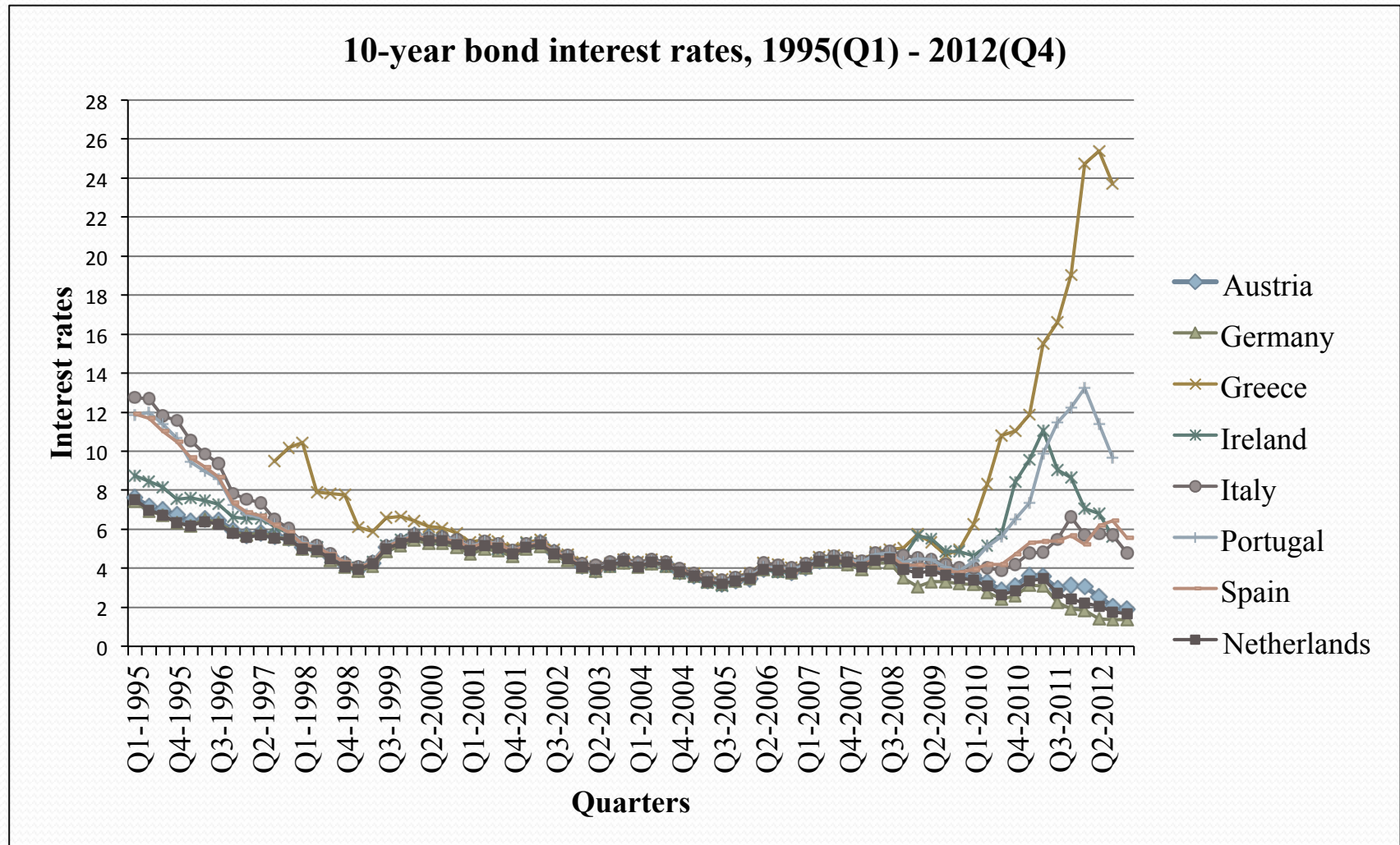
## Converging/diverging economic trends



Source: Botta (2014b)

# Is Eurozone an Optimal Currency Area?

**Finance-led** macroeconomic convergence/divergence<sup>(1)</sup>:

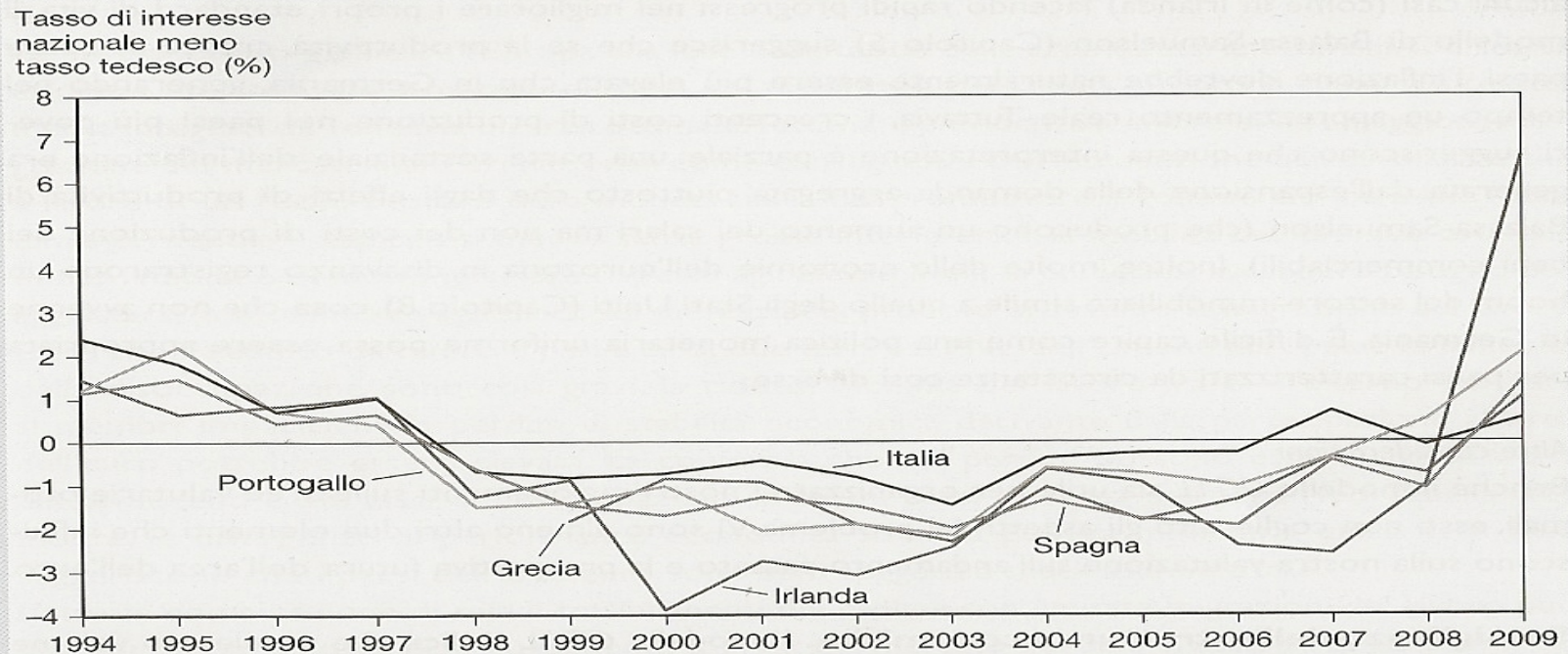


Source: Botta (2014b)



# Is Eurozone an Optimal Currency Area?

Finance-led macroeconomic convergence/divergence<sup>(2)</sup>:



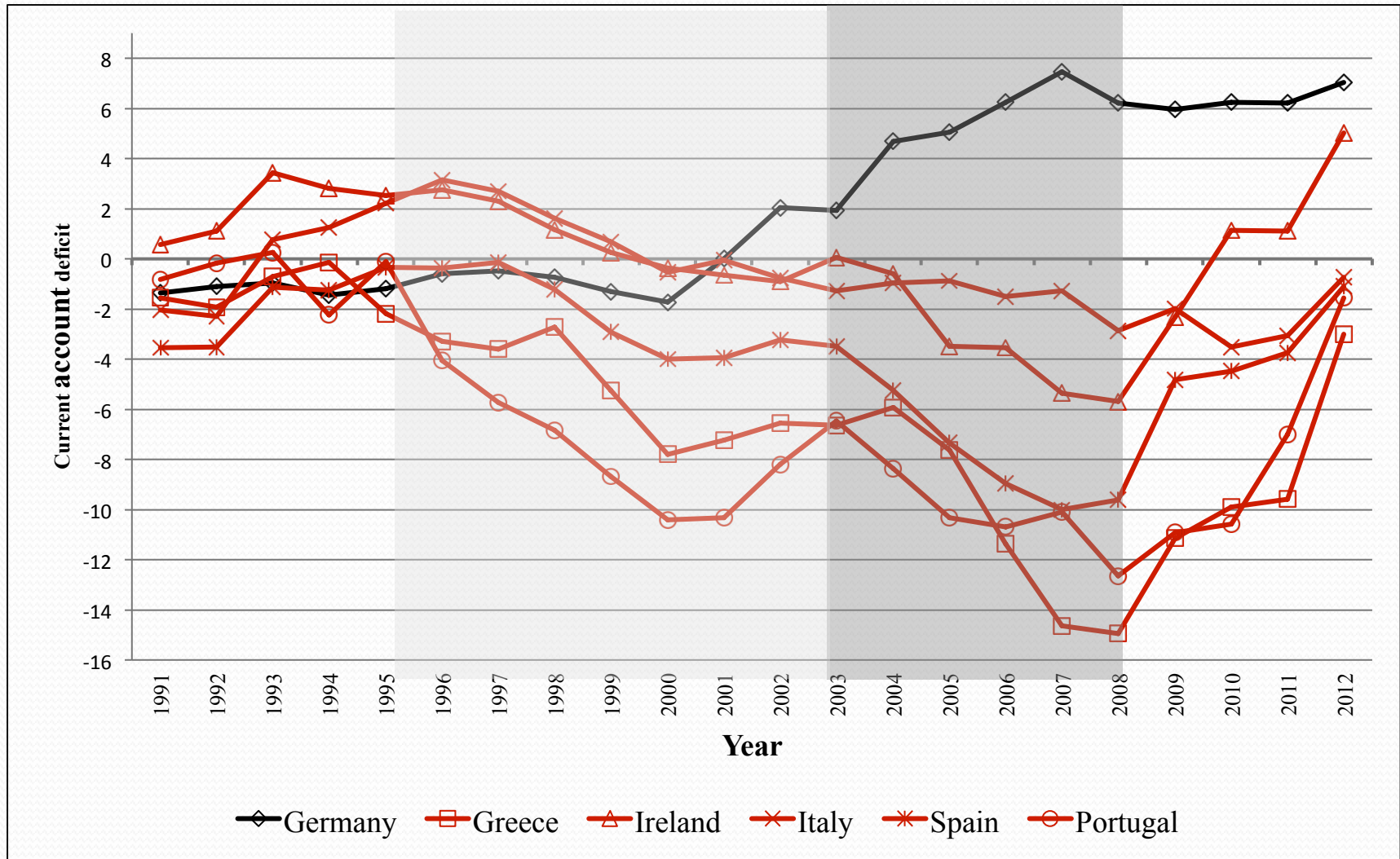
**Figura 9.8 Divergenze nei tassi di interesse reali all'interno dell'area dell'euro.** Con l'avvicinarsi della data del lancio dell'euro (1999), i tassi di interesse nominali a lungo termine sui titoli nei paesi futuri membri mostrarono una tendenza alla convergenza, portando a tassi di interesse reali minori in quei paesi caratterizzati da una inflazione relativamente elevata. Il grafico illustra i tassi di interesse reali a lungo termine per ogni paese meno il tasso di interesse reale a lungo termine della Germania. I tassi di interesse reali sono calcolati come tassi nominali medi sui titoli di stato a 10 anni meno tasso di inflazione del medesimo anno.

Source: Krugman, Obstfeld, Melitz (2012)



# Is Eurozone an Optimal Currency Area?

Finance-led macroeconomic convergence/divergence<sup>(3)</sup>:



Source: Botta (2014b)

# Is Eurozone an Optimal Currency Area?

**Finance-led** macroeconomic convergence/divergence<sup>(4)</sup>:

**Tabella 9.3** Saldi del conto corrente dei paesi dell'area euro, 2005-2011 (% del PIL).  
(Fonte: FMI, *World Economic Outlook Database*.)

	Grecia	Irlanda	Italia	Portogallo	Spagna	Germania
2005	-7,4	-3,5	-1,7	-10,4	-7,4	5,1
2006	-11,2	-3,5	-2,6	-10,7	-9,0	6,3
2007	-14,4	-5,3	-2,4	-10,1	-10,0	7,5
2008	-14,7	-5,7	-2,9	-12,6	-9,6	6,3
2009	-11,0	-2,9	-2,1	-10,9	-5,2	5,6
2010	-10,5	0,5	-3,3	-9,9	-4,6	5,7
2011	-8,4	1,8	-3,5	-8,6	-3,8	5,0

Source: Krugman, Obstfeld, Melitz (2012)

# Is Eurozone an Optimal Currency Area?

## Who is to blame<sup>(1)</sup>?

“...the Stability and Growth Pact (SGP) did not succeed in securing **fiscal discipline**. Good economic times before the crisis were not used to achieve sustainable budgetary positions. Revenue windfalls were spent instead of being used to foster fiscal consolidation, violations of the deficit criterion were only slowly corrected and the debt criterion was largely ignored [...] as a consequence, public finances of many euro area Member States were ill-prepared when the financial crisis erupted in the summer of 2007 (ECB, Monthly Bulletin, May 2012) ”.

“...the lack of solidarity and **discipline** of some of the EMU states and the inability to find binding sanction-proven rules for public budget deficits and debt is the reason for the present problems (Kosters, 2009)”

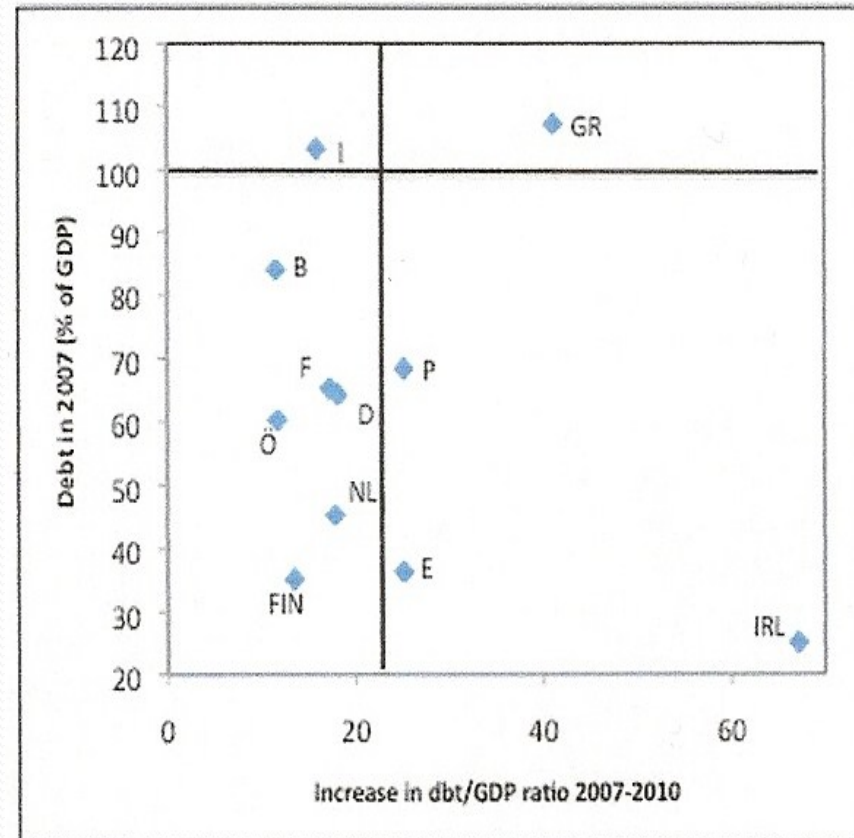


# Is Eurozone an Optimal Currency Area?

## Who is to blame<sup>(2)</sup>?

“It is striking that the crisis has hit countries that started out with debts in excess of 100% of GDP and/or experienced an increase of more than 25% in the debt/GDP ratio. Greece underwent both and was the first country affected. Where excessive demand has been supported by budget deficits, as in Greece and Portugal, the link is obvious, and so is the case of Italy that did not manage to significantly reduce its debt ratio for over well a decade. Where demand was supported by credit growth, as in Ireland and Spain, the link is subtler since both countries had been fiscally disciplined in the years leading in the crisis. This observation calls for **extending the definition of fiscal discipline** in a monetary union. Ireland and Spain were disciplined until their banks were in need of rescue. The ensuing massive bank bailouts directly increased the public debt....(Wyplosz, 2013)”

Public debt level and increase since 2007 (% of GDP)



Source: Wyplosz (2013)

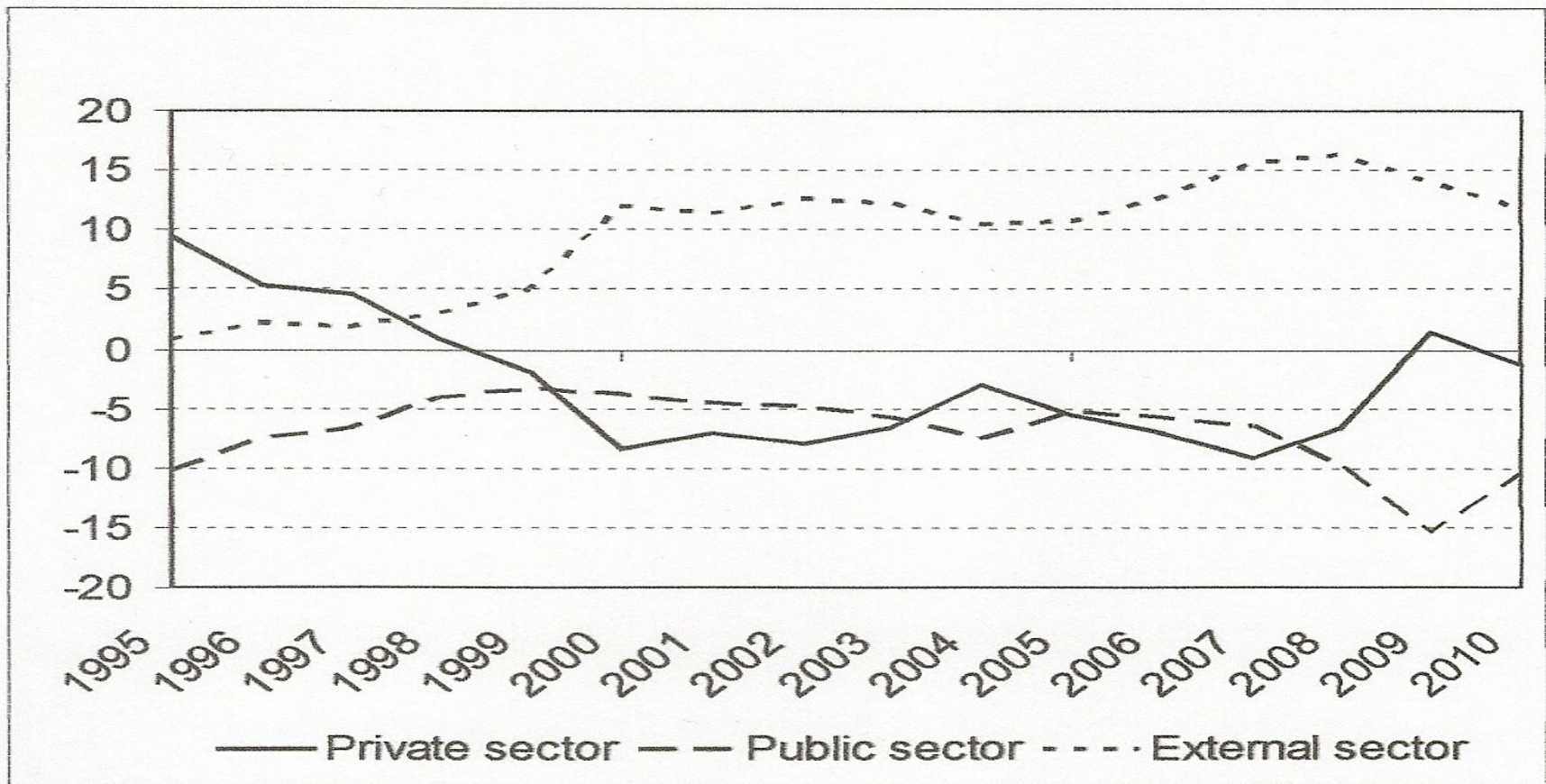
# Is Eurozone an Optimal Currency Area?

Who is to blame? A country-specific perspective

## Greece

Figure 7:

Sectoral financial balances as a share of nominal GDP, Greece, 1995-2010



Source: Hein, Truger and van Treeck (2011)



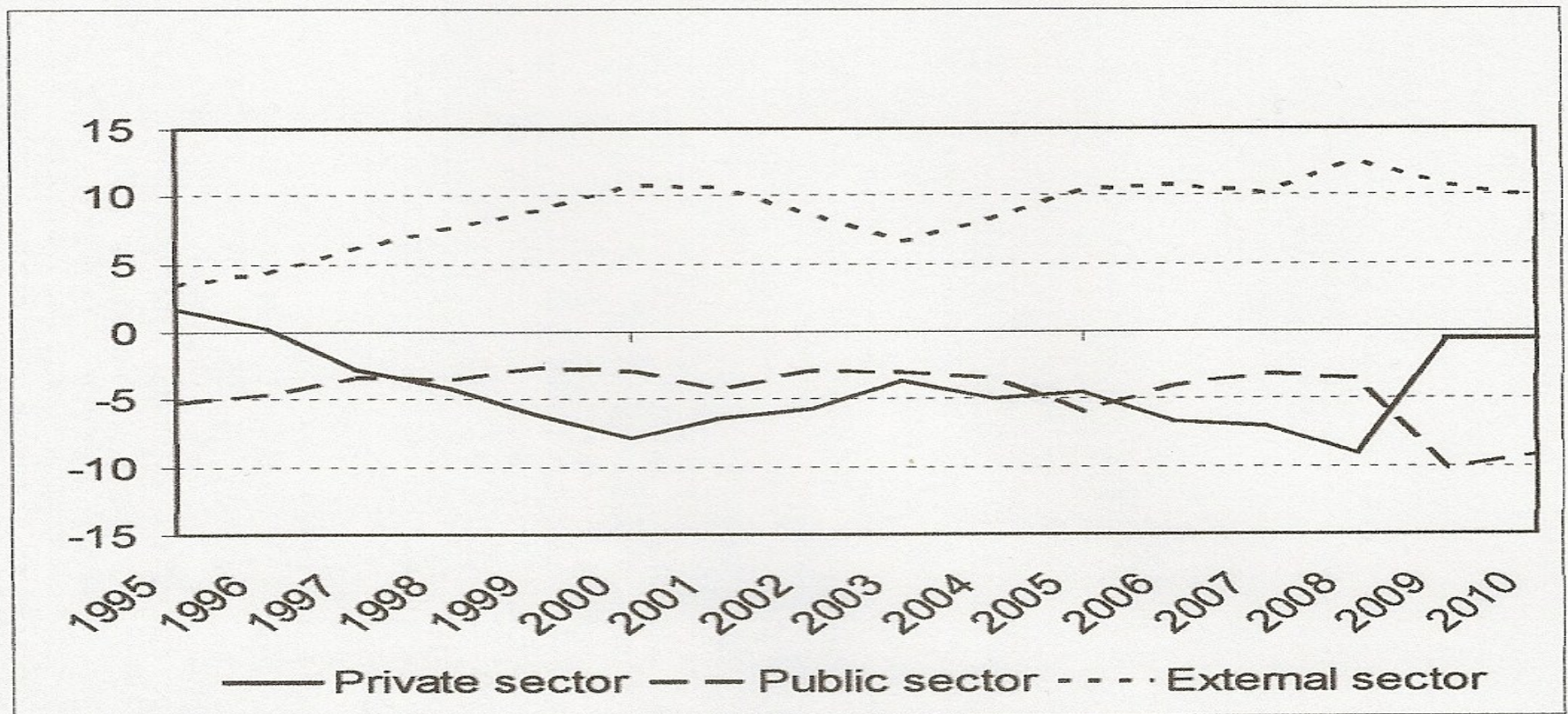
# Is Eurozone an Optimal Currency Area?

Who is to blame? A country-specific perspective

## Portugal

Figure 6:

Sectoral financial balances as a share of nominal GDP, Portugal, 1995-2010



Source: Hein, Truger and van Treeck (2011)



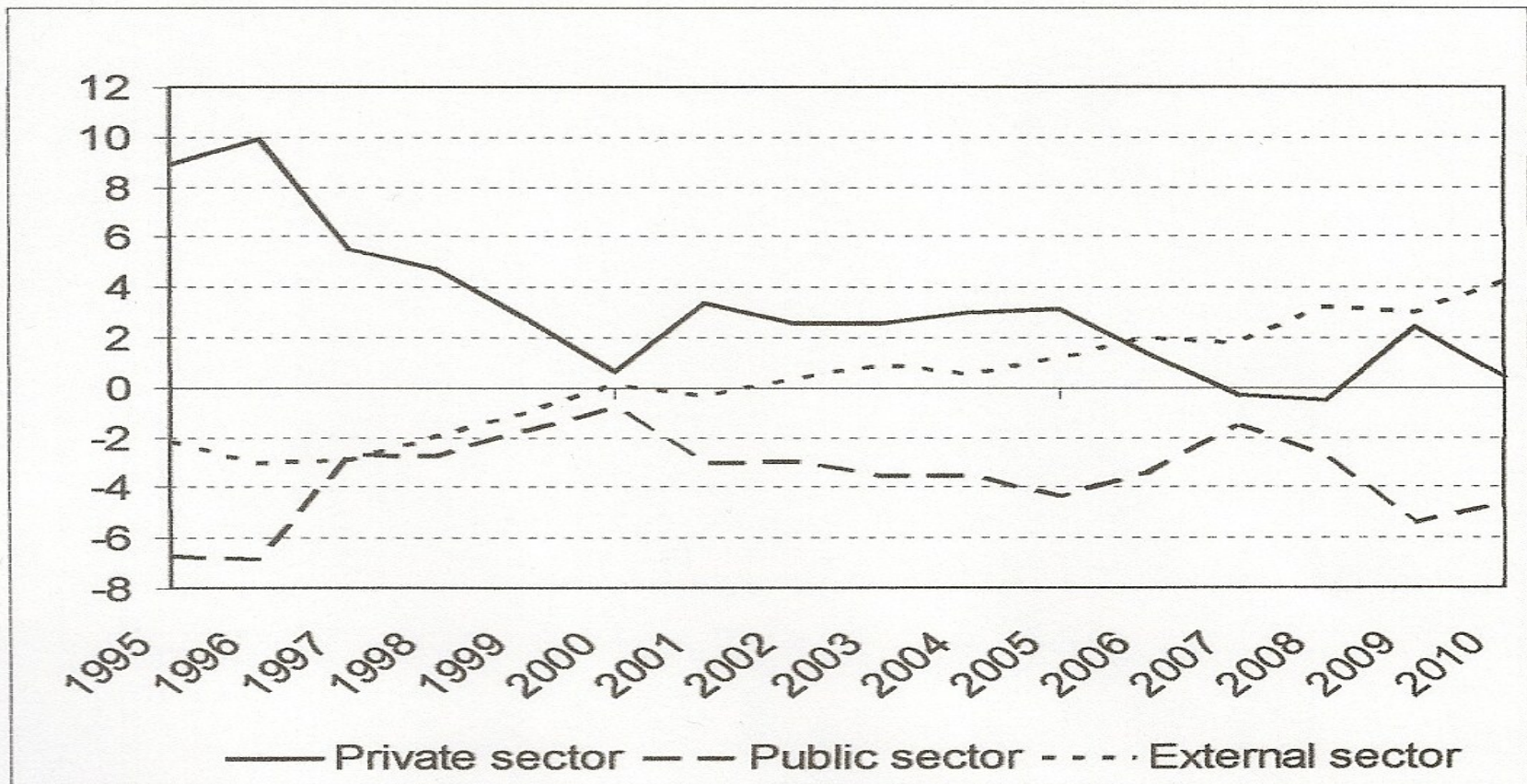
# Is Eurozone an Optimal Currency Area?

Who is to blame? A country-specific perspective

## Italy

Figure 8:

Sectoral financial balances as a share of nominal GDP, Italy, 1995-2010



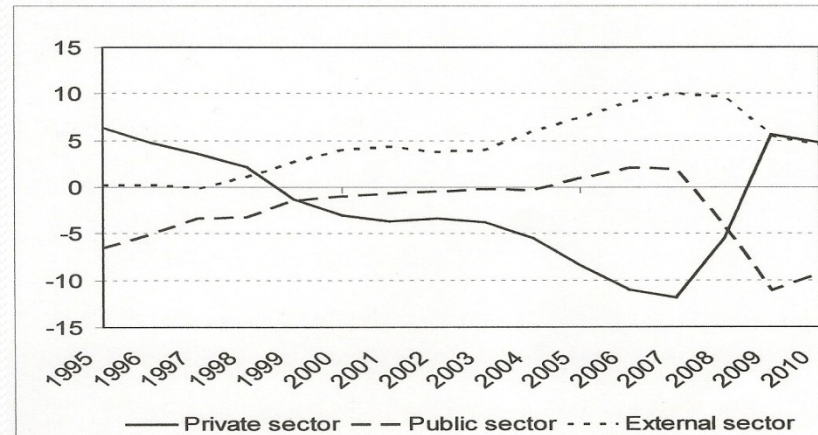
Source: Hein, Truger and van Treeck (2011)

# Is Eurozone an Optimal Currency Area?

## Who is to blame? A more country-specific perspective Spain and Ireland

Figure 4:

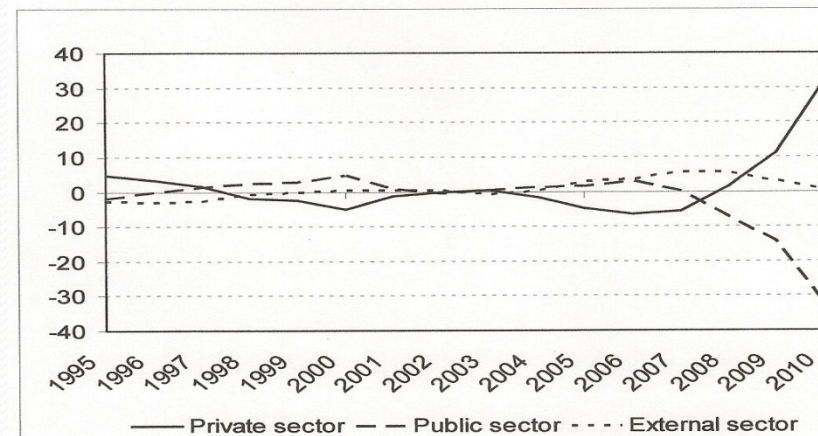
Sectoral financial balances as a share of nominal GDP, Spain, 1995 - 2010



Source: AMECO Database of European Commission, authors' calculations.

Figure 5:

Sectoral financial balances as a share of nominal GDP, Ireland, 1995 - 2010



Source: Hein, Truger and  
van Treeck (2011)

# Is Eurozone an optimal currency area?

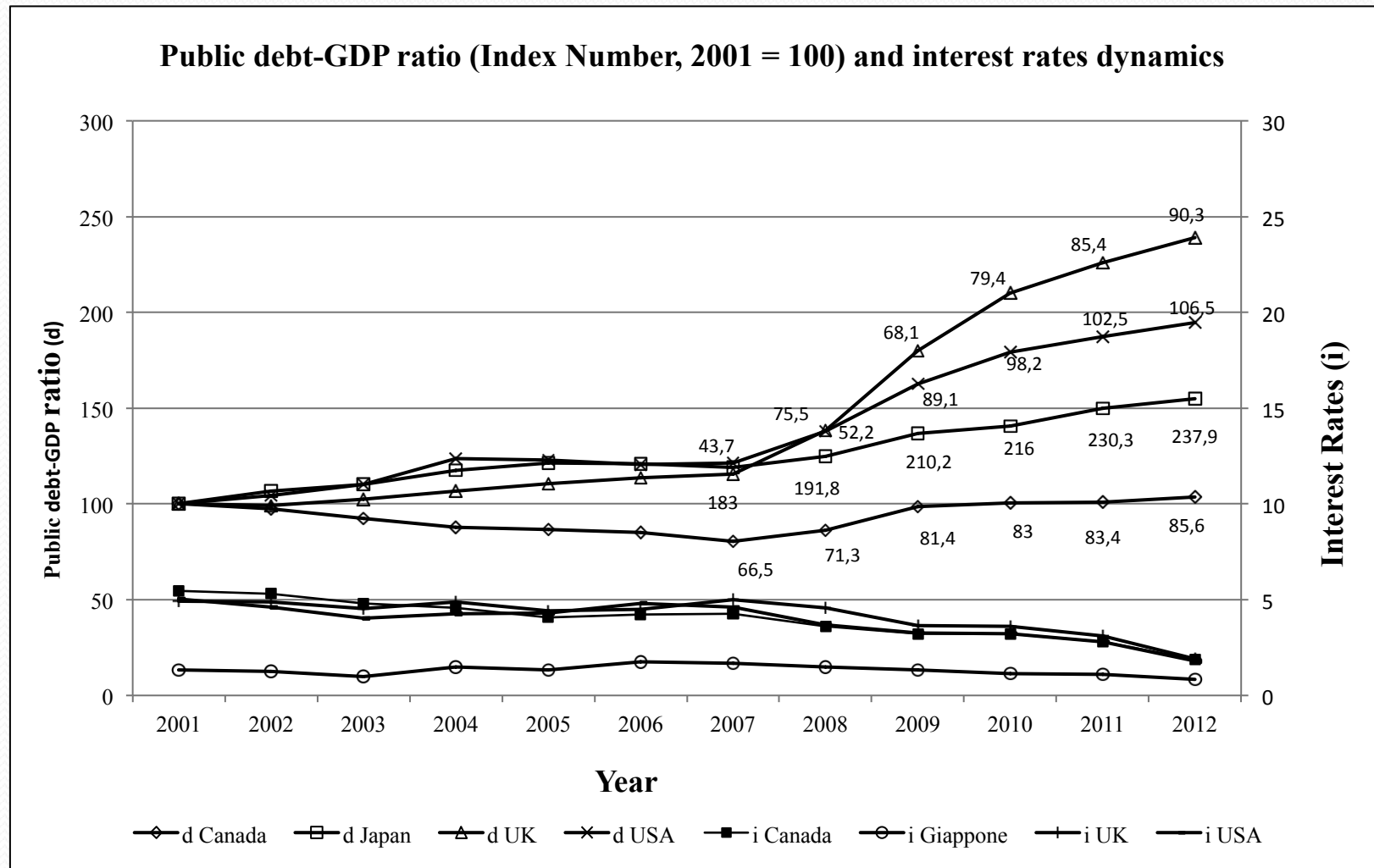
An international comparison of some macroeconomic data

	Germany			Greece			Ireland			Italy			Portugal			Spain			UK			US		
	$\Omega+id$	$d$	$g$	$\Omega+id$	$d$	$g$	$\Omega+id$	$d$	$g$	$\Omega+id$	$d$	$g$	$\Omega+id$	$d$	$g$	$\Omega+id$	$d$	$g$	$\Omega+id$	$d$	$g$	$\Omega+id$	$d$	$g$
2007	0,2	65,2	3,4	-6,7	105,4	3,0	0,1	24,8	5,2	-1,5	103,1	1,7	-3,2	68,3	2,4	1,9	36,3	3,5	-2,8	43,7	3,6	-2,7	67,2	1,9
2008	-0,1	66,7	0,6	-9,7	110,7	-0,1	-7,3	44,2	-3,0	-2,7	105,8	-1,2	-3,7	71,6	0,0	-4,2	40,2	0,6	-5,1	52,2	-1	-6,7	76,1	-0,3
2009	-3,2	74,4	-5,1	-15,6	127,1	-3,3	-14,2	65,2	-7,0	-5,4	116,1	-5,5	-10,2	83,1	-2,9	-11,2	53,9	-3,7	-10,3	68	-4	-13,3	89,7	-3,1
2010	-4,3	83,2	3,6	-10,6	142,8	-3,5	-31,3	92,5	-0,4	-4,5	118,7	1,8	-9,8	93,4	1,4	-9,3	61,2	-0,1	-9,9	75	1,8	-11,6	98,6	2,4
2011	-1,0	81,5	3,1	-9,2	163,3	-6,9	-9,9	105,0	0,5	-3,9	120,1	0,3	-4,0	106,8	-1,5	-8,5	68,5	0,5	-8,6	82	0,8	-10,1	102,9	1,8
2012	-0,4*	83*	1*	-7,5*	170,7*	-6,0*	-8,3*	118,0*	0,4*	-2,7*	126,3*	-2,3*	-5,0*	119,0*	-3,0*	-7,0*	90,7*	-1,5*	-8,3*	88,7*	-0,4*	-8,7*	107,2*	2,8*

Botta (2014a)



# What does it happens in monetarily sovereign countries...



Note: numbers in brackets are debt-to-GDP ratios in the countries under observations

Source: Botta (2013)

# Is Eurozone an Optimal Currency Area?

## Some relevant institutional DETAILS

**Lack of a federal Government:** “a full monetary and economic union is unattainable without a political union; and the latter pre-supposes fiscal integration and not just fiscal harmonization [...] it is a dangerous error to believe that monetary and economic union can precede a political union [...] the creation of a monetary union and Community control over national budgets generates pressures which lead to a breakdown of the whole system it will prevent the development of a political union, not promote it (Kaldor, 1971)”

“...economic sovereignty has several dimensions, two of them particularly relevant to the problem of managing aggregate demand and maintaining full employment. Fiscal and monetary policies must go hand in hand, and if there is to be an ‘optimal policy mix’, they should have the same domain. There should be a treasury, empowered to tax and spend, opposite each central bank, whether to cooperate with monetary policy or merely to quarrel with it (Kenen, 1969)”

**Lack of a full-fledged Central Bank:** there is not a bank union with ECB acting as regulatory institutions and lender of last resort (Palley, 2011)

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