

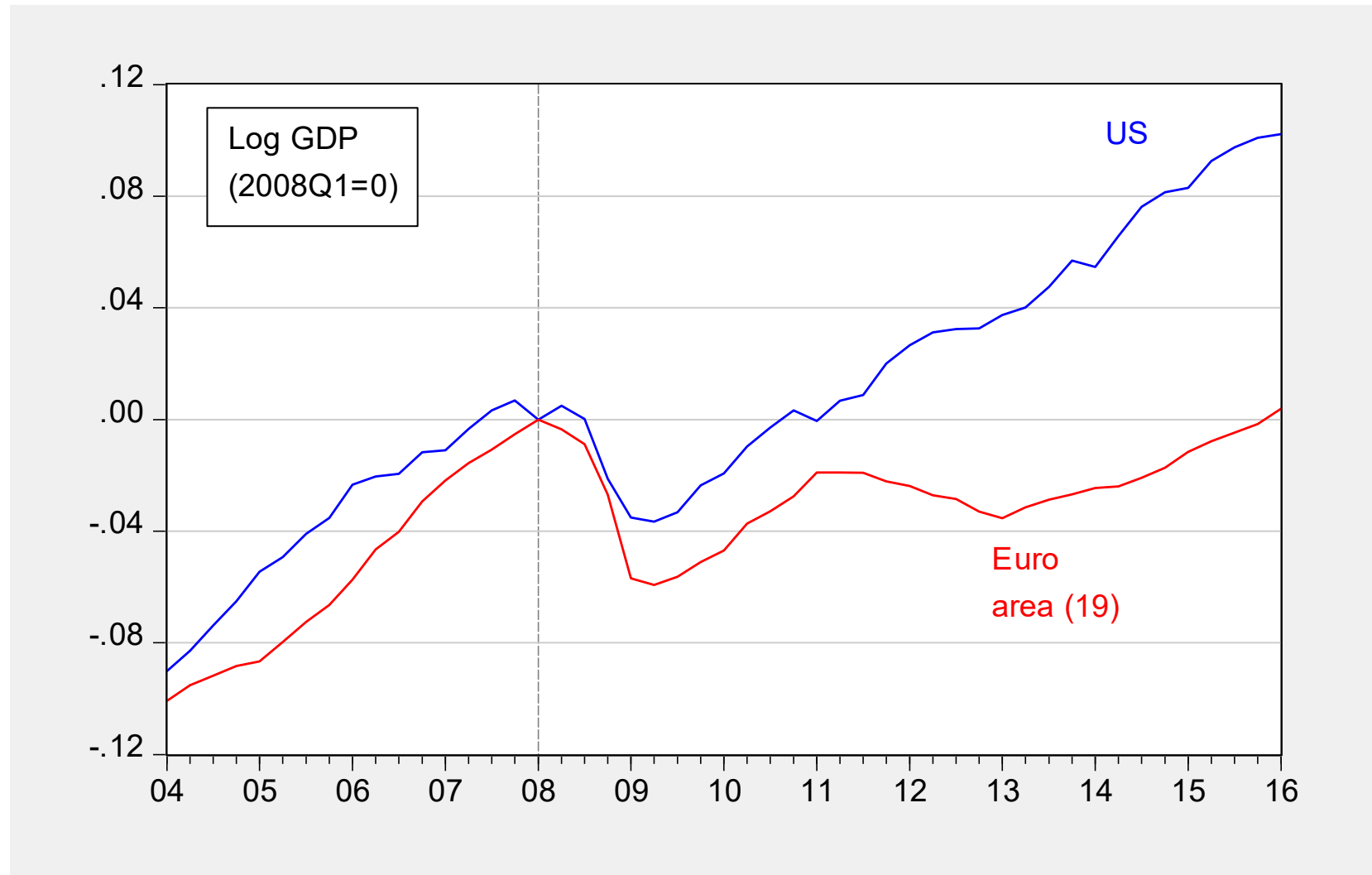
Economics 442  
Macroeconomic Policy

Lecture 28

5/1/2017

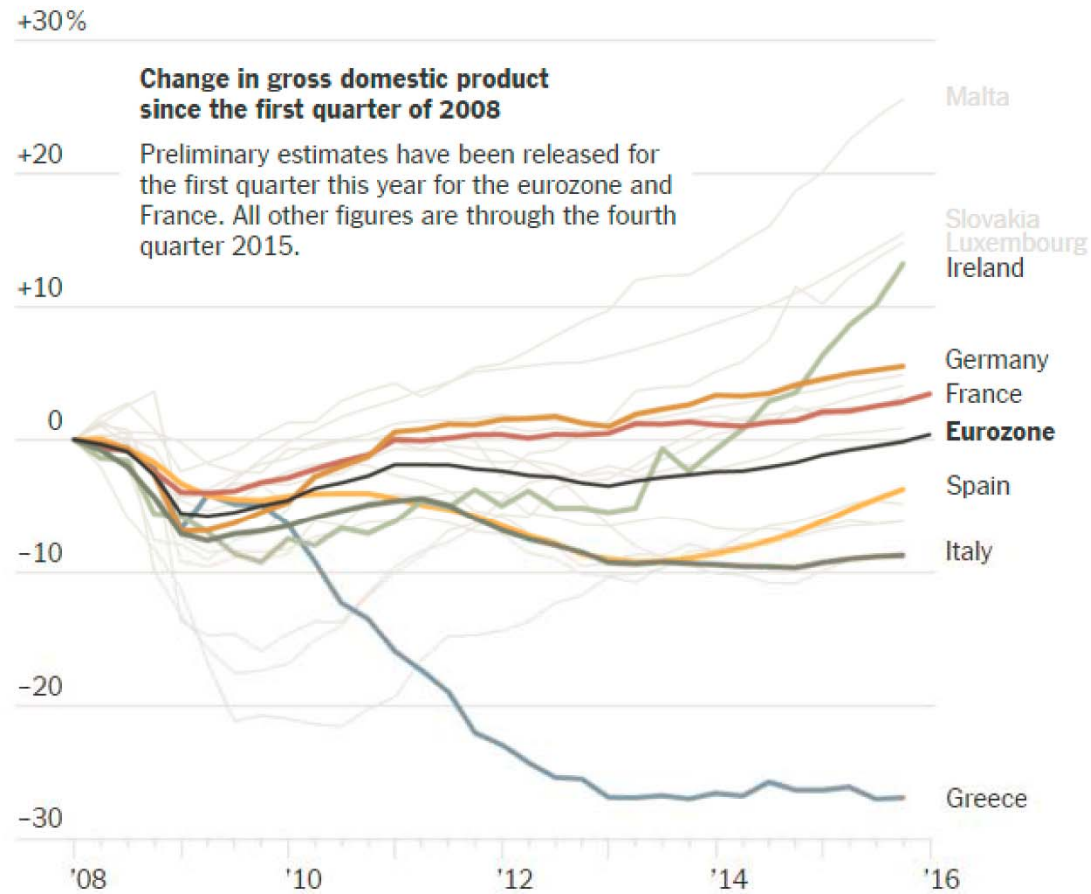
Instructor: Prof. Menzie Chinn  
UW Madison  
Spring 2017

# The Euro Zone vs. US



Source: BEA, ECB

# What's Wrong with the Euro Zone?



Figures are adjusted for inflation and seasonal effects, as well as calendar effects in all but Ireland and Slovakia.

Source: Eurostat

Source: Goodman, *NYT* April 29, 2016

# Not All of the Euro Zone Suffers

**Annex Table 1.1.1. European Economies: Real GDP, Consumer Prices, Current Account Balance, and Unemployment**  
*(Annual percent change, unless noted otherwise)*

	Real GDP			Consumer Prices <sup>1</sup>			Current Account Balance <sup>2</sup>			Unemployment <sup>3</sup>		
	2016	Projections		2016	Projections		2016	Projections		2016	Projections	
		2017	2018		2017	2018		2017	2018		2017	2018
Europe	2.0	2.0	2.0	0.9	2.5	2.4	2.4	2.3	2.4	...	...	...
Advanced Europe	1.8	1.8	1.7	0.4	1.8	1.6	2.9	2.9	2.9	8.7	8.3	8.0
Euro Area <sup>4,5</sup>	1.7	1.7	1.6	0.2	1.7	1.5	3.4	3.0	3.0	10.0	9.4	9.1
Germany	1.8	1.6	1.5	0.4	2.0	1.7	8.5	8.2	8.0	4.2	4.2	4.2
France	1.2	1.4	1.6	0.3	1.4	1.2	-1.1	-0.9	-0.5	10.0	9.6	9.3
Italy	0.9	0.8	0.8	-0.1	1.3	1.3	2.7	2.0	1.8	11.7	11.4	11.0
Spain	3.2	2.6	2.1	-0.2	2.4	1.4	2.0	1.5	1.6	19.6	17.7	16.6
Netherlands	2.1	2.1	1.8	0.1	0.9	1.4	9.6	9.2	9.1	5.9	5.4	5.3
Belgium	1.2	1.6	1.5	1.8	2.0	1.7	1.0	0.9	1.0	8.0	7.8	7.6
Austria	1.5	1.4	1.3	1.0	2.1	1.8	2.4	2.4	2.2	6.1	5.9	5.9
Greece	0.0	2.2	2.7	0.0	1.3	1.4	-0.6	-0.3	-0.0	23.8	21.9	21.0
Portugal	1.4	1.7	1.5	0.6	1.2	1.4	0.8	-0.3	-0.4	11.1	10.6	10.1
Ireland	5.2	3.5	3.2	-0.2	0.9	1.5	4.7	4.7	4.7	7.9	6.5	6.3
Finland	1.4	1.3	1.4	0.4	1.4	1.6	-1.1	-1.3	-1.2	8.8	8.5	8.3
Slovak Republic	3.3	3.3	3.7	-0.5	1.2	1.5	0.4	0.3	0.2	9.7	7.9	7.4
Lithuania	2.3	2.8	3.1	0.7	2.8	2.0	-0.9	-1.6	-1.5	7.9	7.4	7.2
Slovenia	2.5	2.5	2.0	-0.1	1.5	2.0	6.8	5.5	5.1	7.9	7.0	6.6
Luxembourg	4.0	3.7	3.5	0.1	1.4	1.3	4.8	5.1	5.1	6.4	5.9	5.7
Latvia	2.0	3.0	3.3	0.1	2.8	2.5	1.5	-1.1	-1.4	9.6	9.4	9.2
Estonia	1.6	2.5	2.8	0.8	3.2	2.5	2.7	1.4	0.9	6.9	8.3	8.9
Cyprus	2.8	2.5	2.3	-1.2	1.5	1.4	-2.4	-2.5	-2.5	12.9	11.3	10.2
Malta	5.0	4.1	3.5	0.9	1.5	1.6	5.8	5.5	5.3	4.8	4.7	4.7
United Kingdom <sup>5</sup>	1.8	2.0	1.5	0.6	2.5	2.6	-4.4	-3.3	-2.9	4.9	4.9	5.1

Source: IMF, *World Economic Outlook*, April 2017

# How Did They Get There?

- The eurozone is not an optimal currency area
- Fiscal profligacy (sometimes)
- The (seeming) disappearance . . . .  
and reappearance of risk

# Asymmetric Supply Shocks

Western Europe (1969-89)

	Germany	France	Netherlands	Belgium	Denmark	Austria	Switzerland	Italy	United Kingdom	Spain	Portugal	Ireland	Sweden	Norway	Finland
Germany	1.00														
France	0.52	1.00													
Netherlands	0.54	0.36	1.00												
Belgium	0.62	0.40	0.56	1.00											
Denmark	0.68	0.54	0.56	0.37	1.00										
Austria	0.41	0.28	0.38	0.47	0.49	1.00									
Switzerland	0.38	0.25	0.58	0.47	0.36	0.39	1.00								
Italy	0.21	0.28	0.39	0.00	0.15	0.06	-0.04	1.00							
United Kingdom	0.12	0.12	0.13	0.12	-0.05	-0.25	0.16	0.28	1.00						
Spain	0.33	0.21	0.17	0.23	0.22	0.25	0.07	0.20	0.01	1.00					
Portugal	0.21	0.33	0.11	0.40	-0.04	-0.03	0.13	0.22	0.27	0.51	1.00				
Ireland	0.00	-0.21	0.11	-0.02	-0.32	0.08	0.08	0.14	0.05	-0.15	0.01	1.00			
Sweden	0.31	0.30	0.43	0.06	0.35	0.01	0.44	0.46	0.41	0.20	0.39	0.10	1.00		
Norway	-0.27	-0.11	-0.39	-0.26	-0.37	-0.21	-0.18	0.01	0.27	-0.09	0.26	0.08	0.10	1.00	
Finland	0.22	0.12	-0.25	0.06	0.30	0.11	0.06	-0.32	-0.04	0.07	-0.13	-0.23	-0.10	-0.08	1.00

Sources: Authors's calculations; and Bayoumi and Eichengreen (1994).

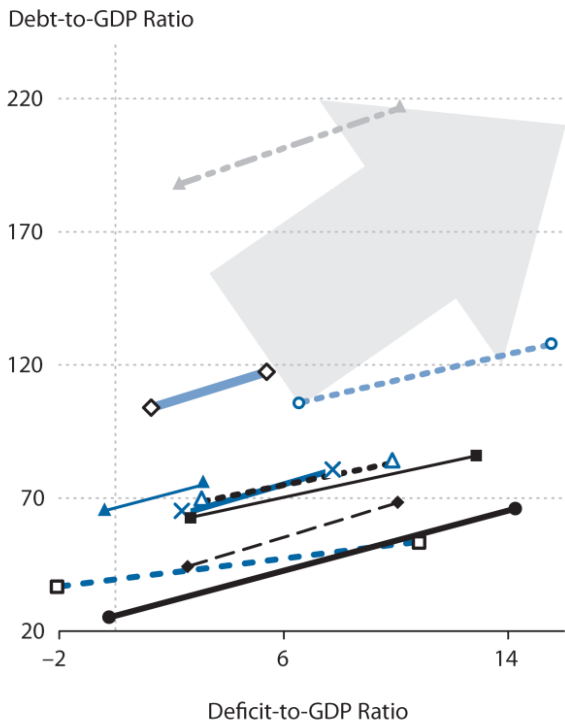
- Growing trade integration (a la Frankel and Rose) was not sufficient to overcome this asymmetry
- Enhanced factor mobility via reductions in labor segmentation was also insufficient

# Fiscal Profligacy...sometimes

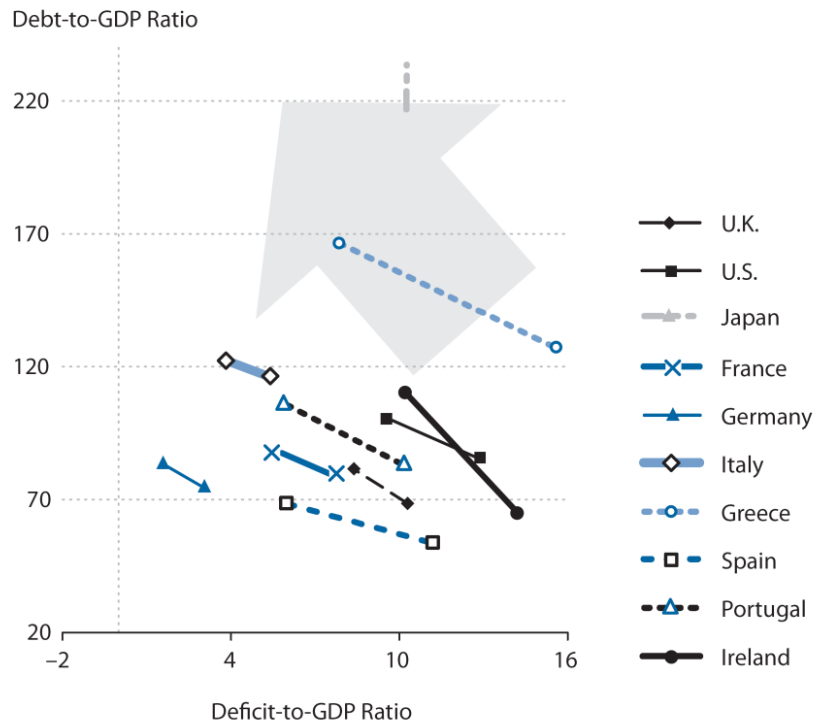
**Figure 4**

**Debt and Deficits Relative to GDP**

**2007-2009**



**2009-2011 (p)**

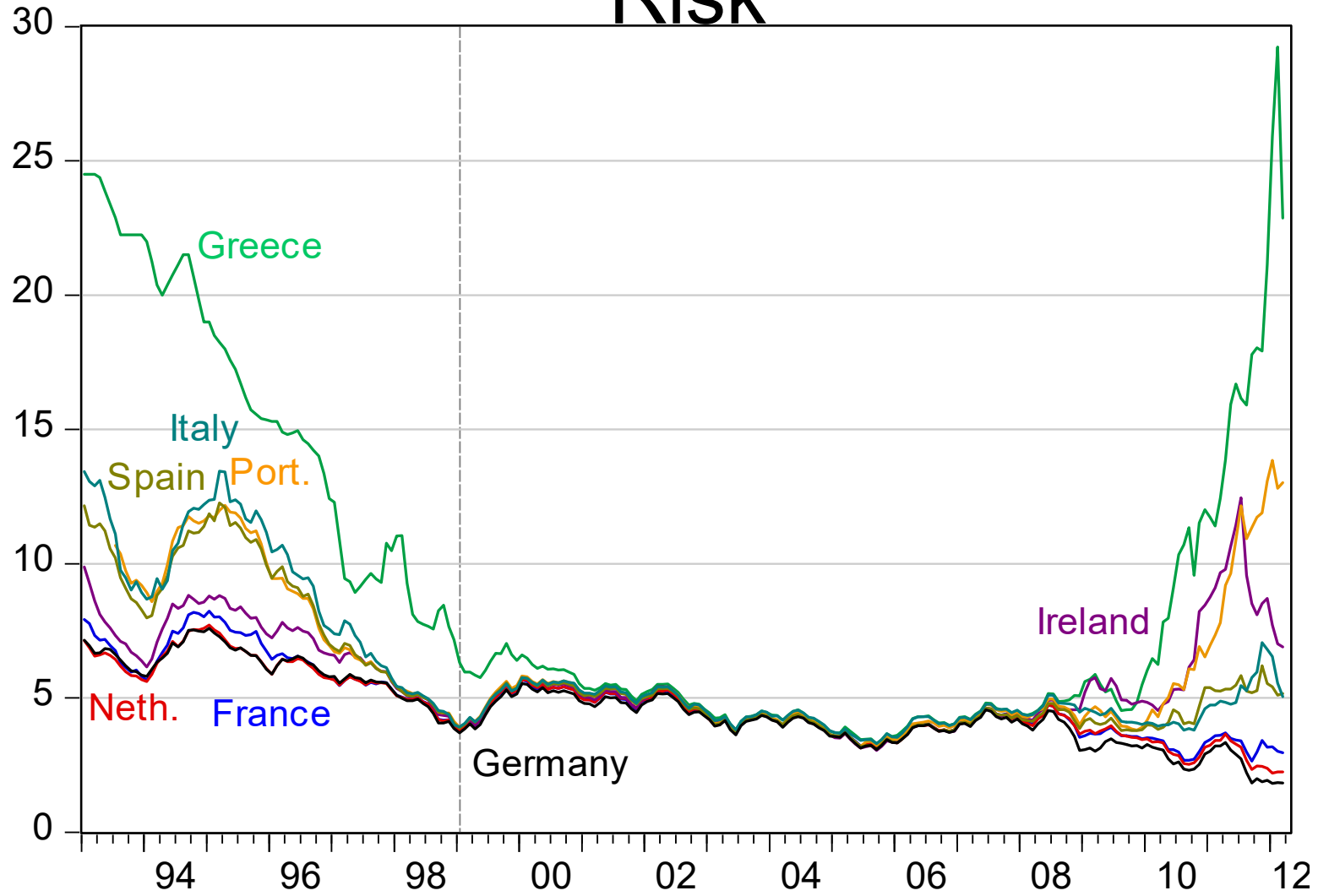


NOTE: Left panel: In most countries, deficit-to-GDP and debt-to-GDP ratios increased during the crisis. Right panel: More recently deficit-to-GDP ratios have fallen, but debt-to-GDP ratios continue to rise. 2011 data are projected (p). Adapted from Contessi (2012).

Source: Bullard, "End of a Theory," FRB KC Review (2012).

Note: Starting points for Spain and Ireland.

# Contingent Liabilities: The Disappearance and Reappearance of Risk

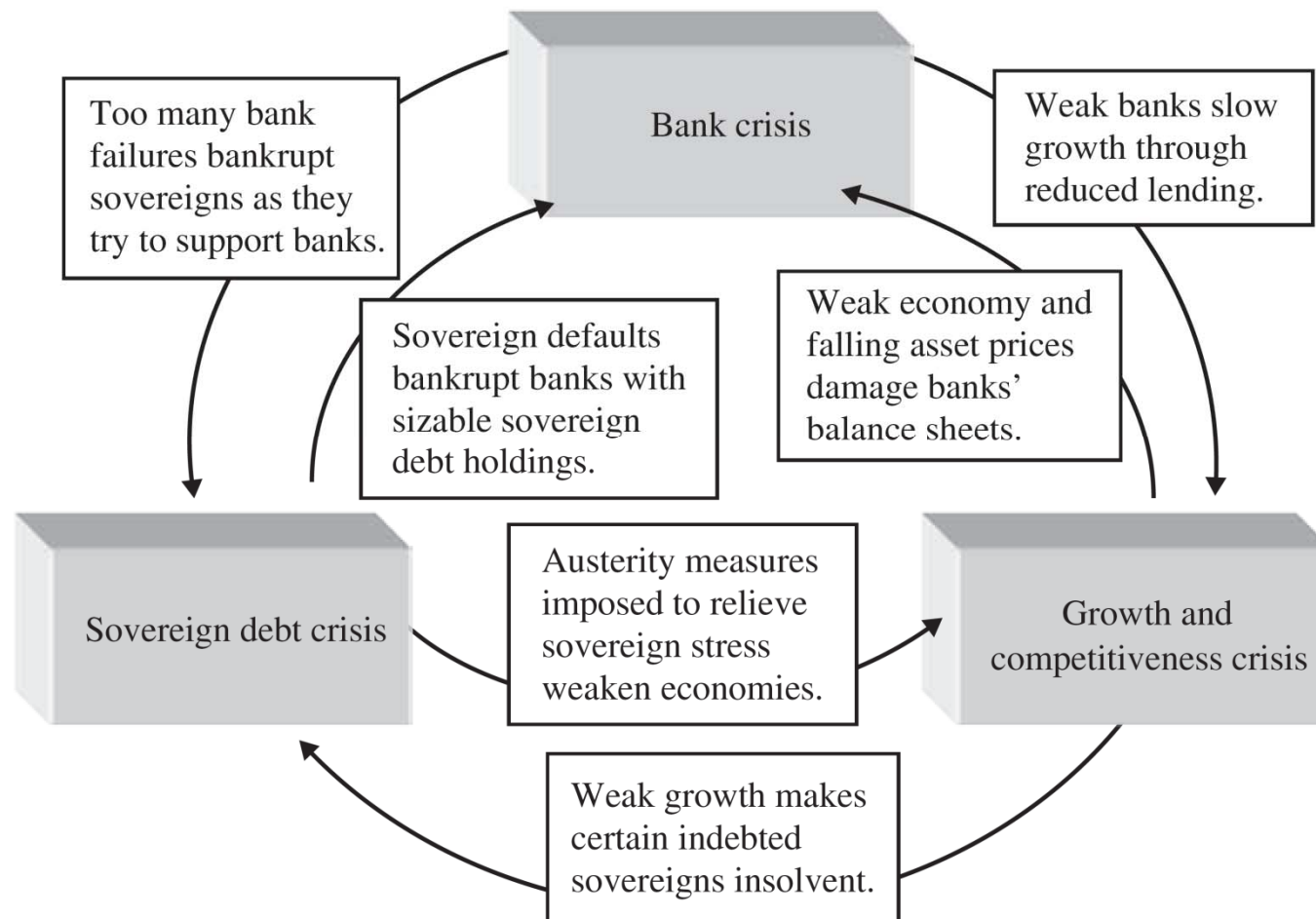


Source: ECB



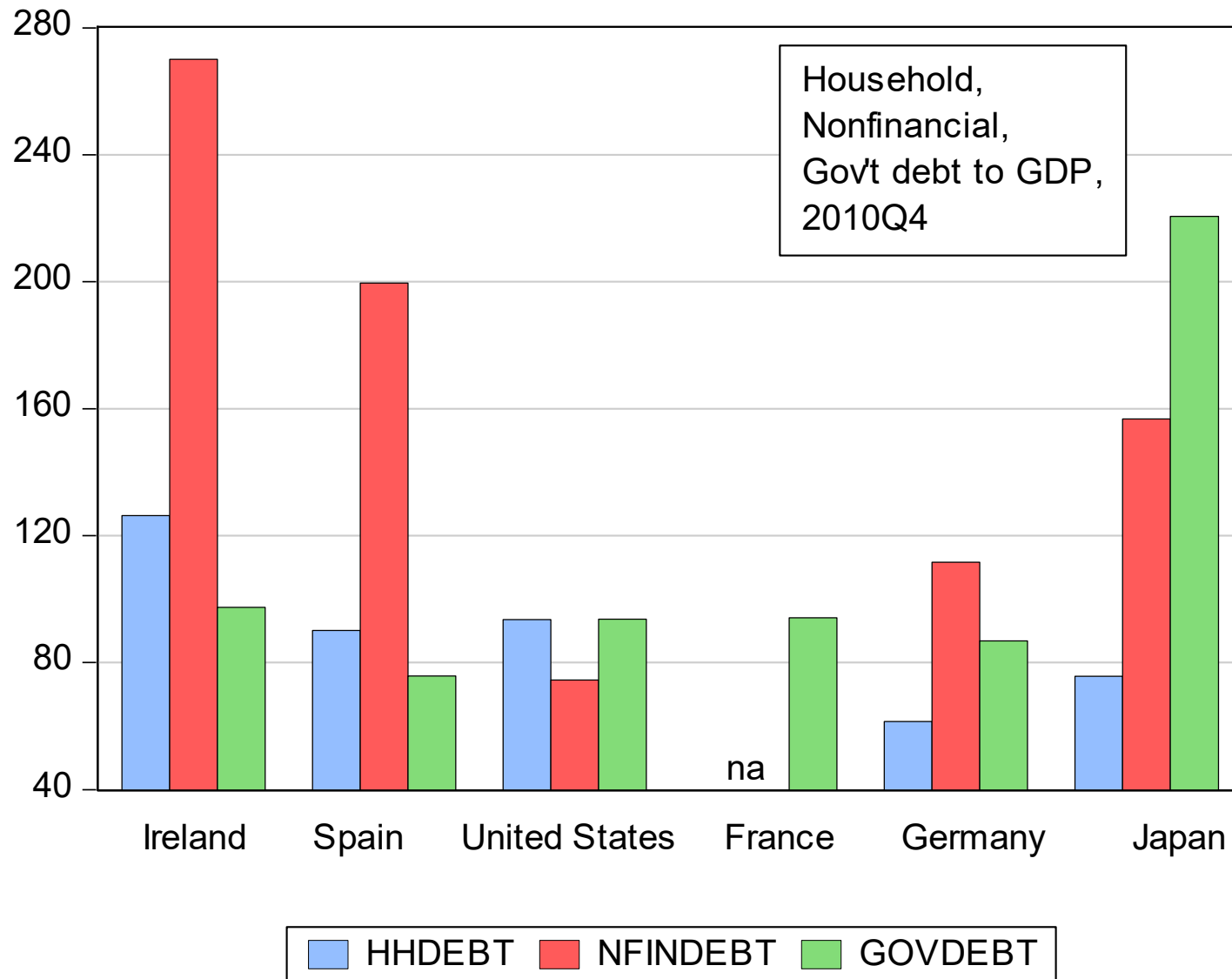
# The Self-Reinforcing Crisis

Figure 2. The Euro's Three Crises



Source: Shambaugh, "The Euro's Three Crises," *BPEA* Spring 2012.

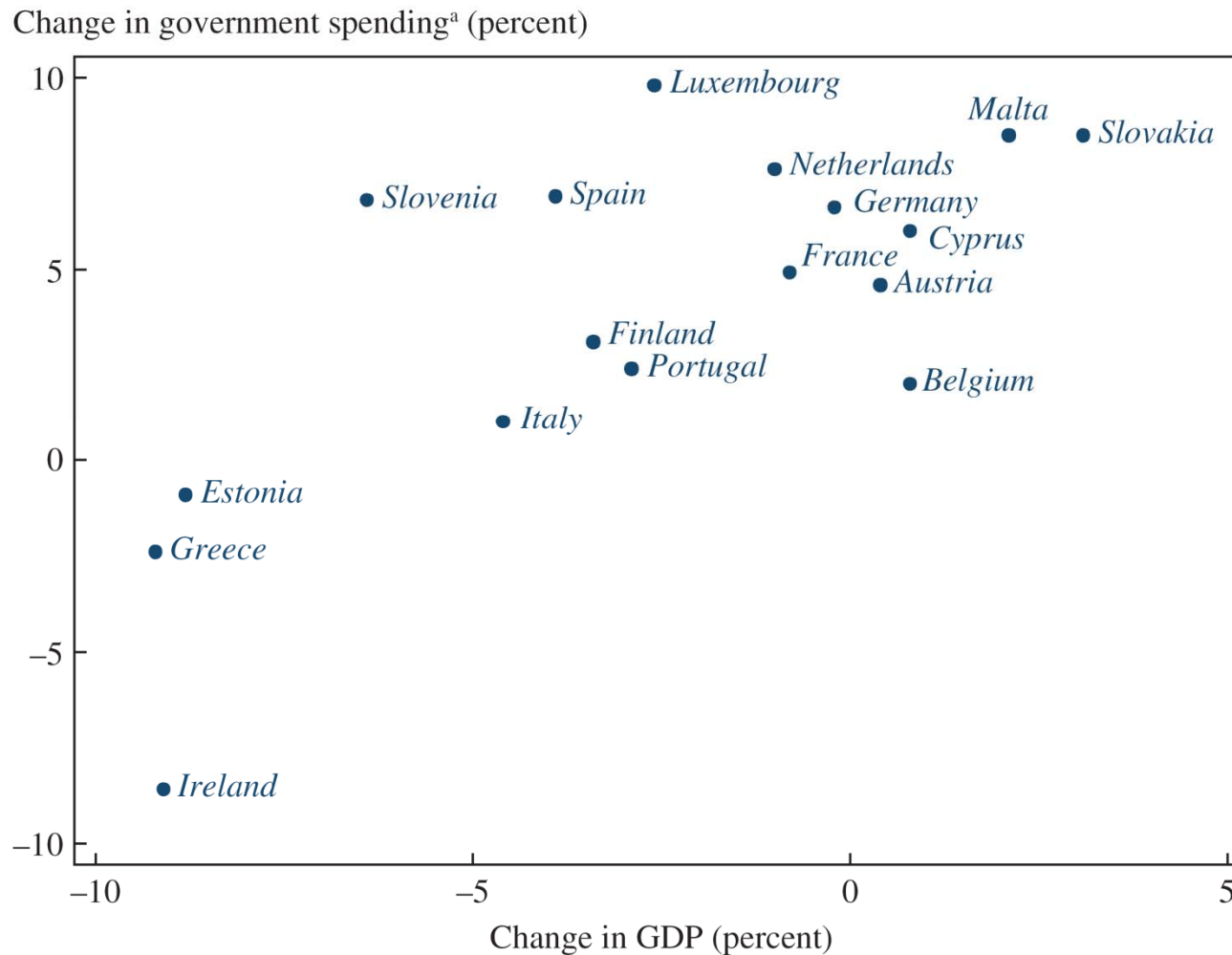
# Indebted Private, Public Sectors



Source: BIS, *Annual Report 2010-11* (June 2011).

# Austerity Is Counterproductive

**Figure 10.** Change in Government Spending and Change in GDP in Euro-Area Countries, 2008Q1–2011Q1



Source: Shambaugh, "The Euro's Three Crises," *BPEA* Spring 2012.

# Back to the AD-AS Framework

$$\varepsilon = \frac{EP}{P^*}$$

$$Y = Y\left(\frac{\bar{E}P}{P^*}, G, T\right)$$

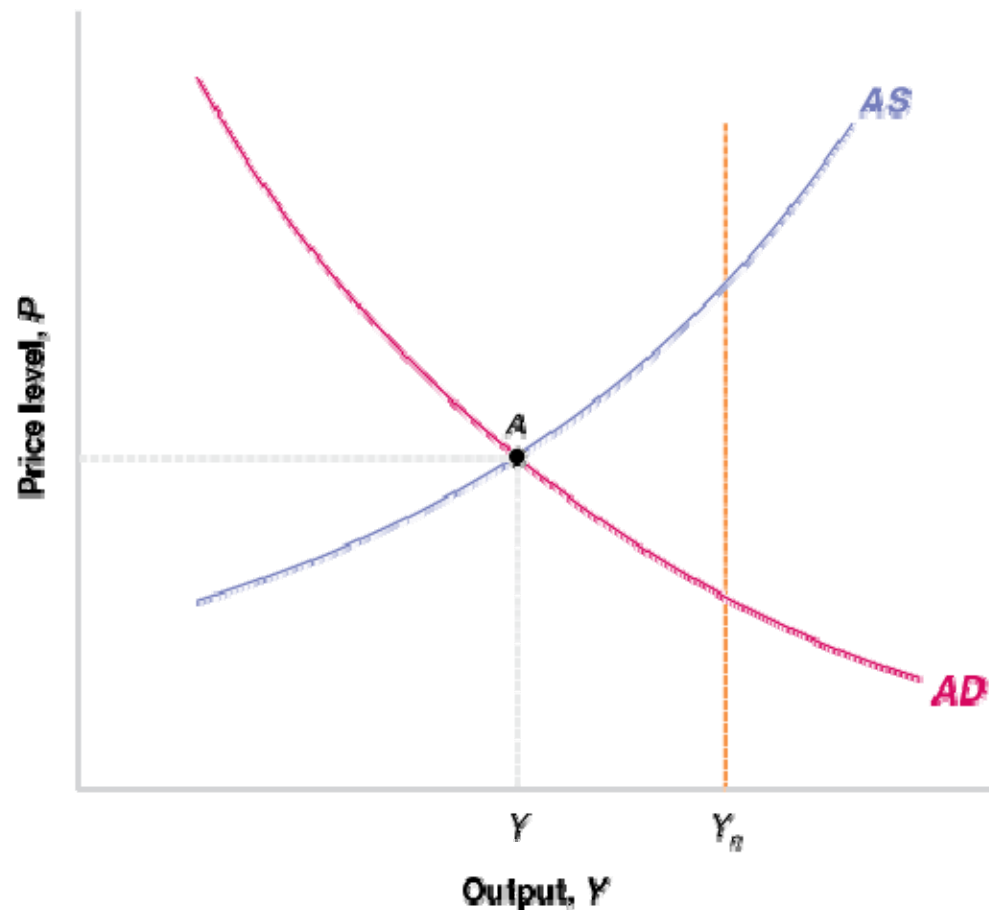
$$P = P^e (1 + \mu) F\left(1 - \frac{Y}{L}, z\right)$$

# Equilibrium in the Short Run and in the Medium Run

## ■ Figure 21 – 1

### ***Aggregate Demand and Aggregate Supply in an Open Economy Under Fixed Exchange Rates***

An increase in the price level leads to a real appreciation and a decrease in output: The aggregate demand curve is downward sloping. An increase in output leads to an increase in the price level: The aggregate supply curve is upward sloping.

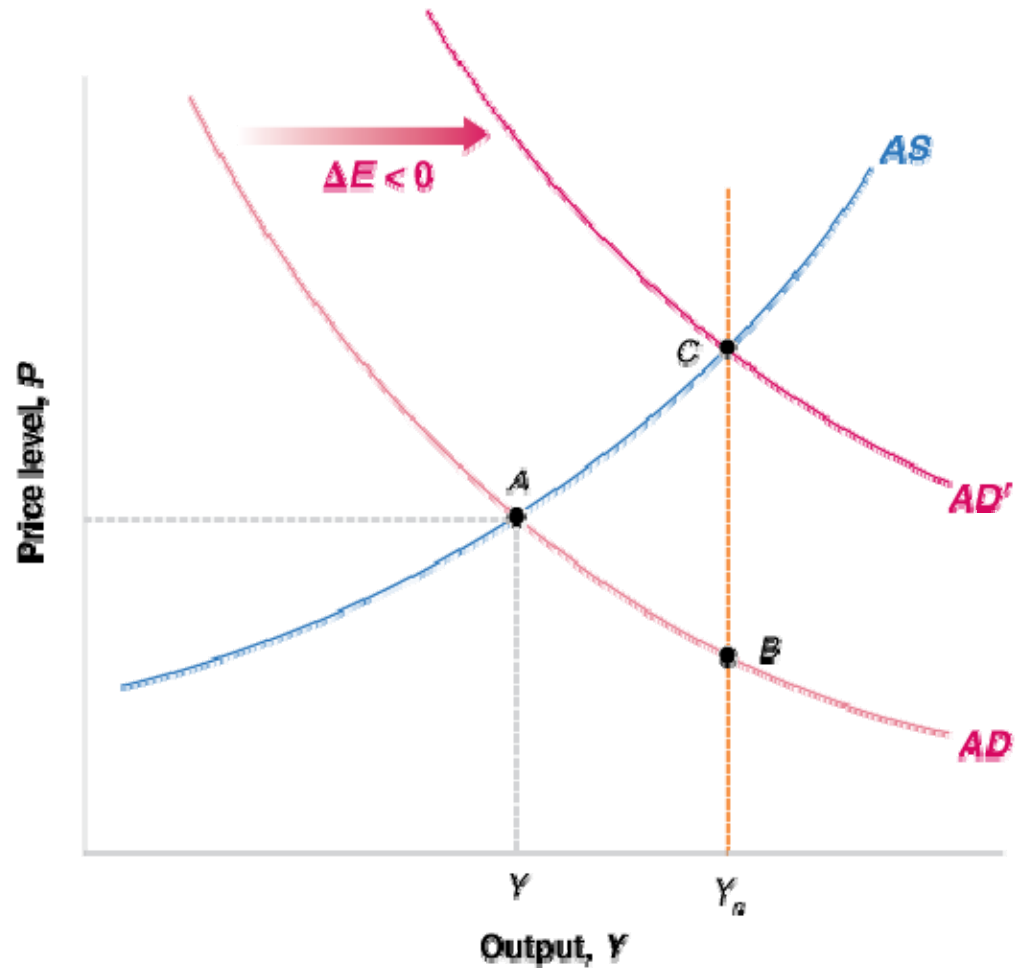


# Devaluation

■ Figure 21 – 3

## ***Adjustment with a Devaluation***

A devaluation of the right size can shift aggregate demand to the right, moving the economy to point C. At point C, output is back to the natural level of output.

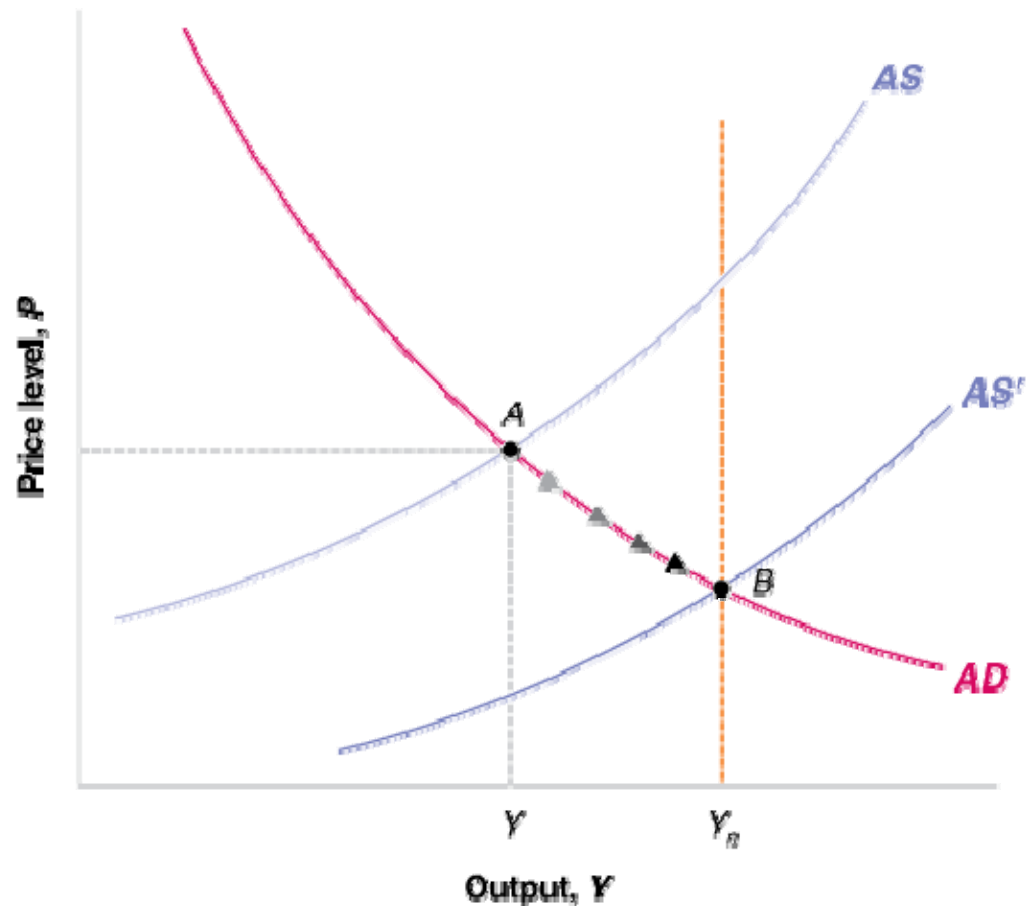


# The Medium Run Price Adjustment in Monetary Union

■ Figure 21 – 2

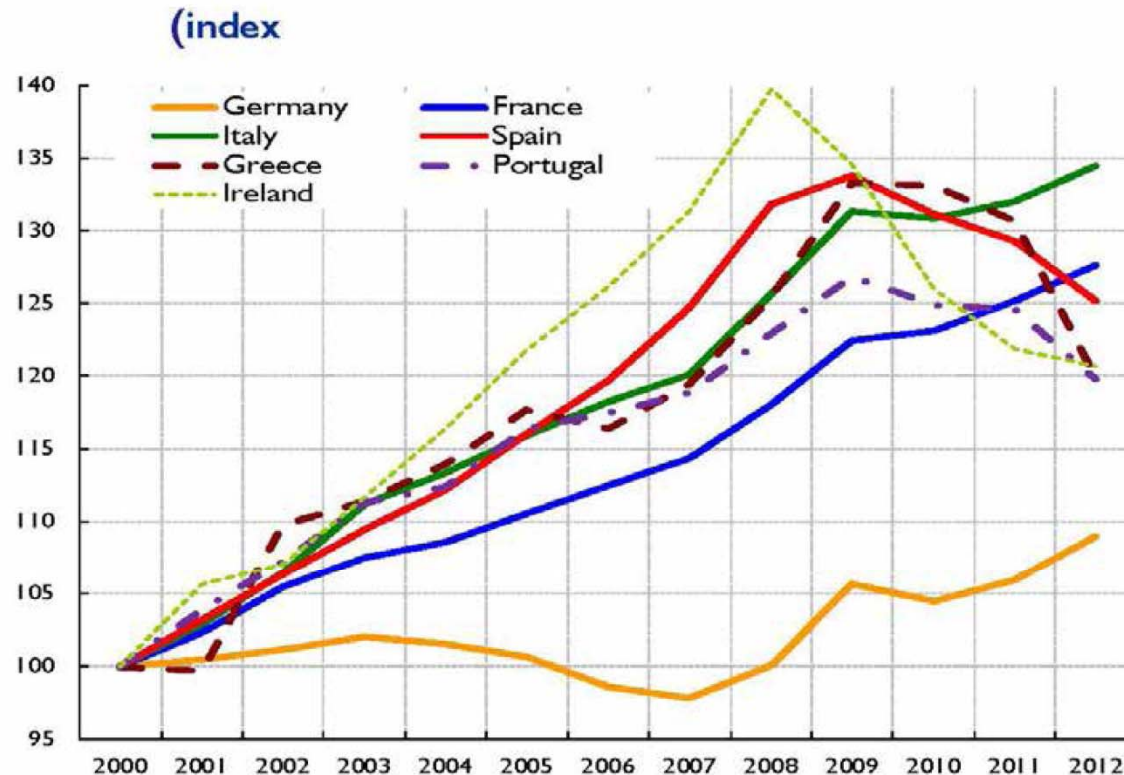
## ***Adjustment under Fixed Exchange Rates***

The aggregate supply curve shifts down over time, leading to a decrease in the price level, to a real depreciation, and to an increase in output. The process ends when output has returned to its natural level.



# And Competitiveness Problems Persist

## C. Structural adjustment underway: unit labour cost adjustment in the euro area



Source: European Commission (Winter 2013 Forecast), ECB calculations.

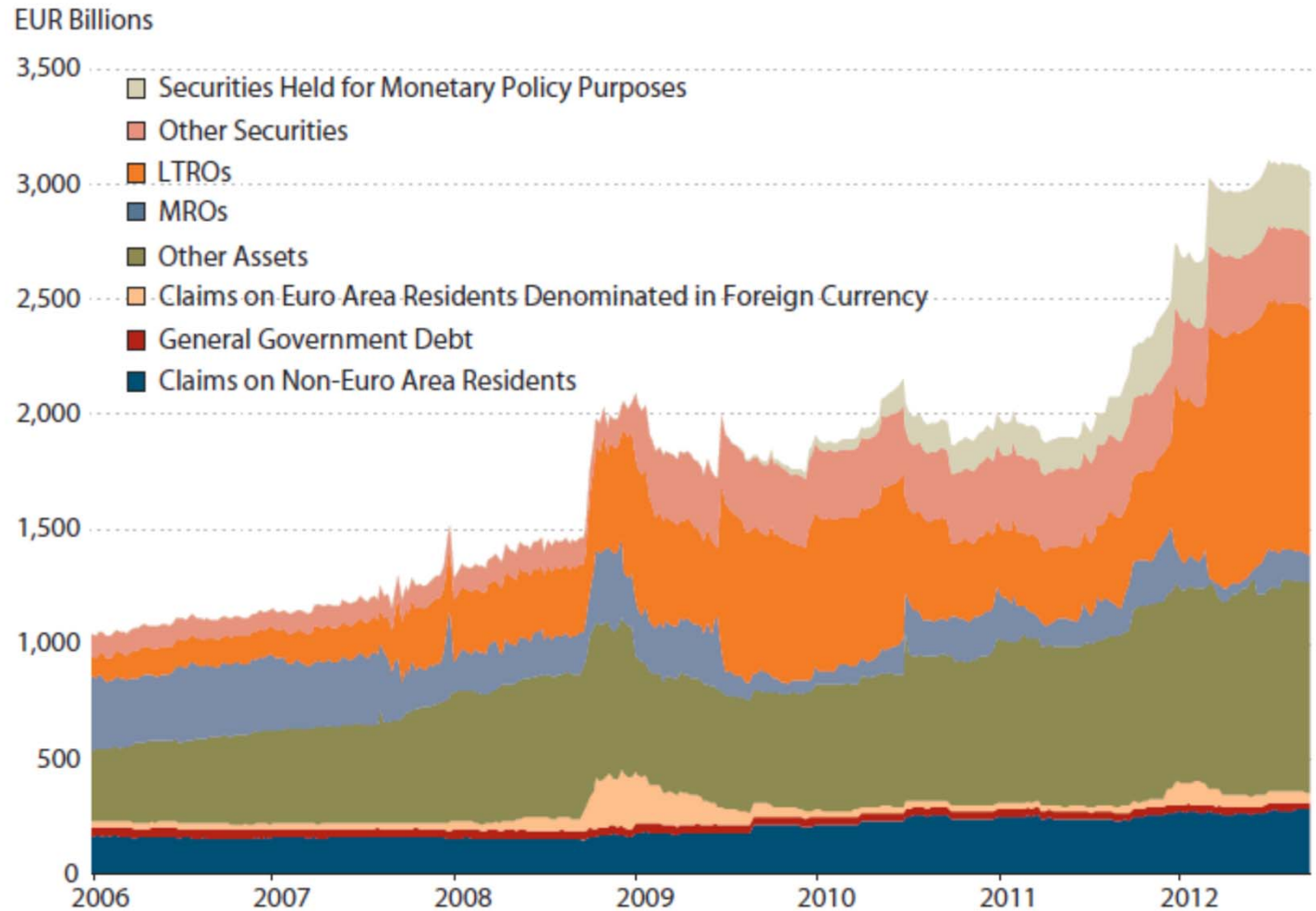
Note: Data for 2012 are forecast. Unit labour costs data are calculated on the basis of full-time equivalent measures of total employment and employees for DE, ES, FR and IT.

Source: Peter Praet, Member of the Executive Board of the European Central Bank, at the afternoon session "The challenges ahead Apr 17, 2013

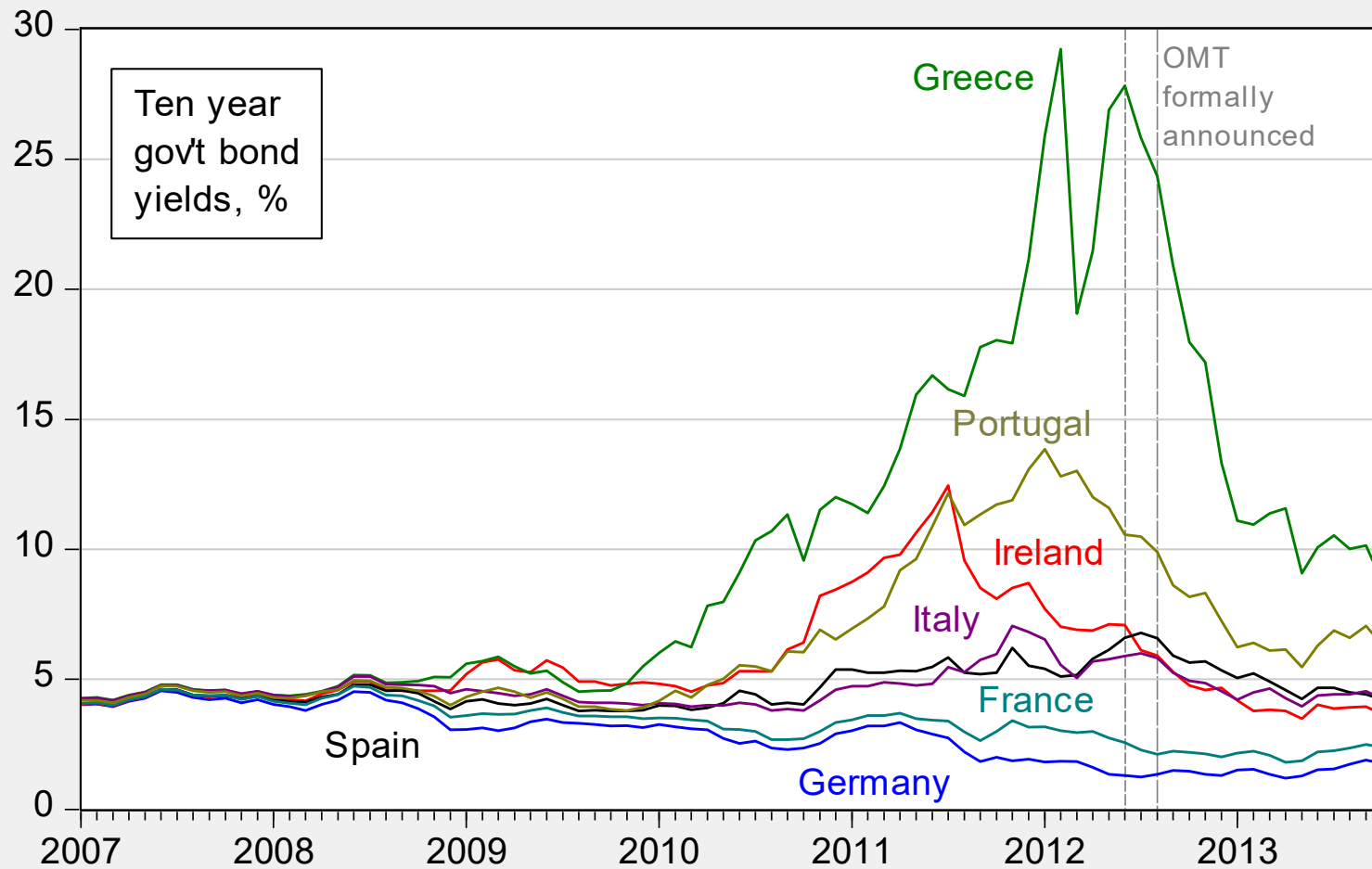


# ECB Intervention

## ECB Assets

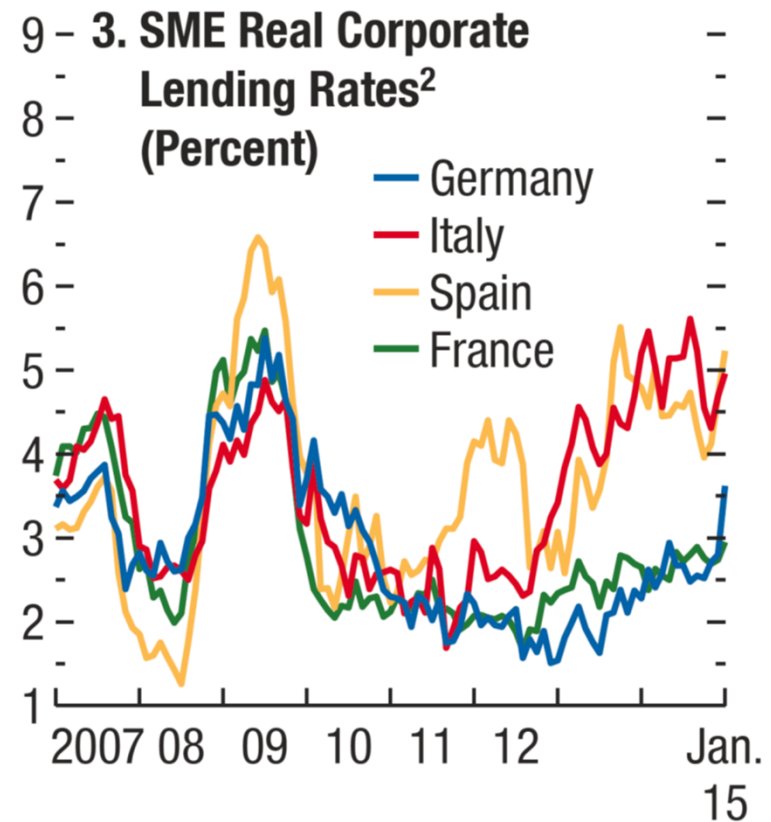
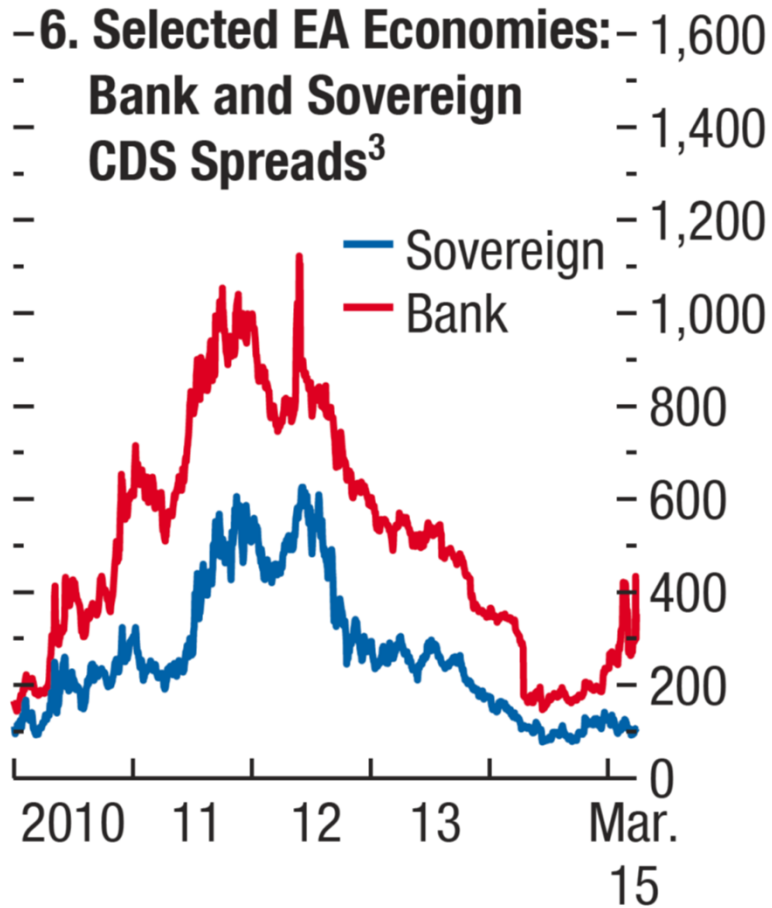


# ECB Drives Down Sovereign Yields



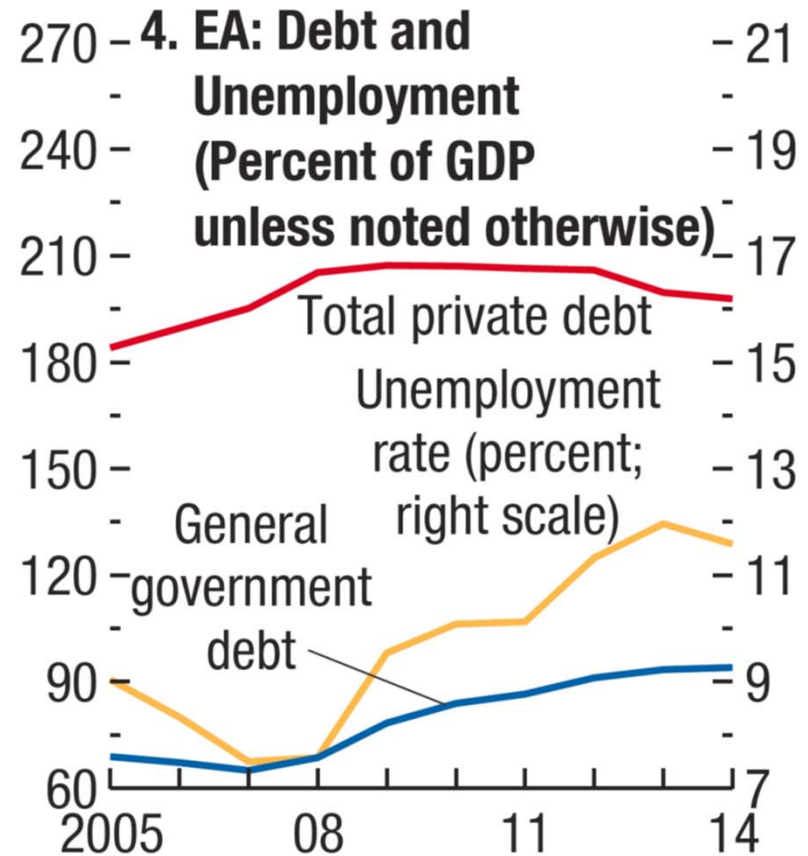
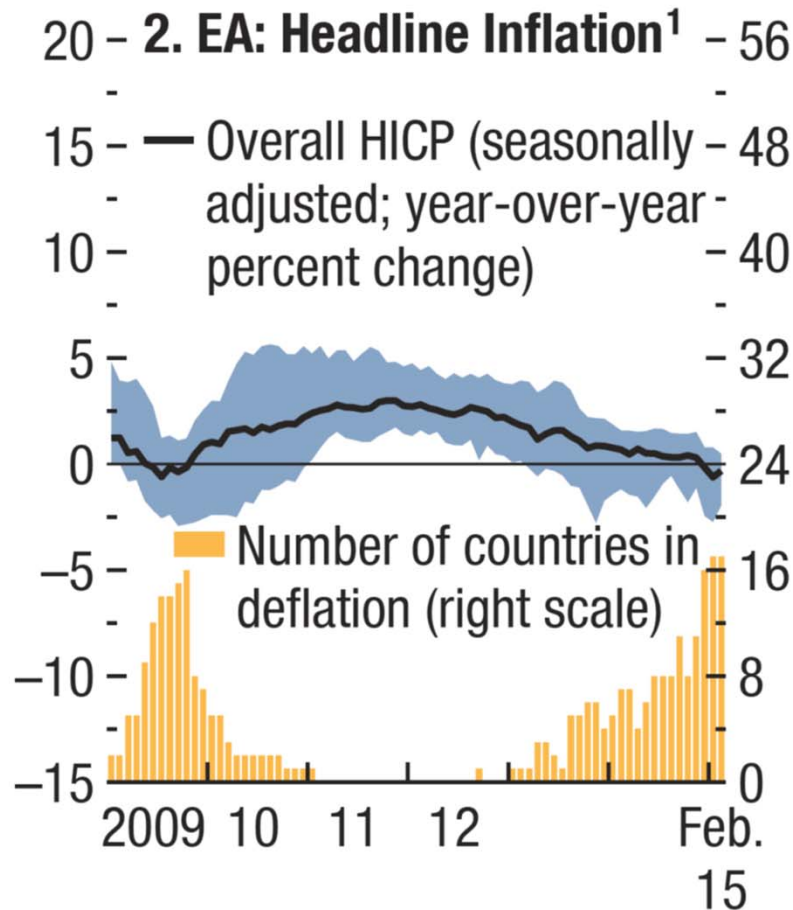
Source: ECB

# Capital Market Fragmentation



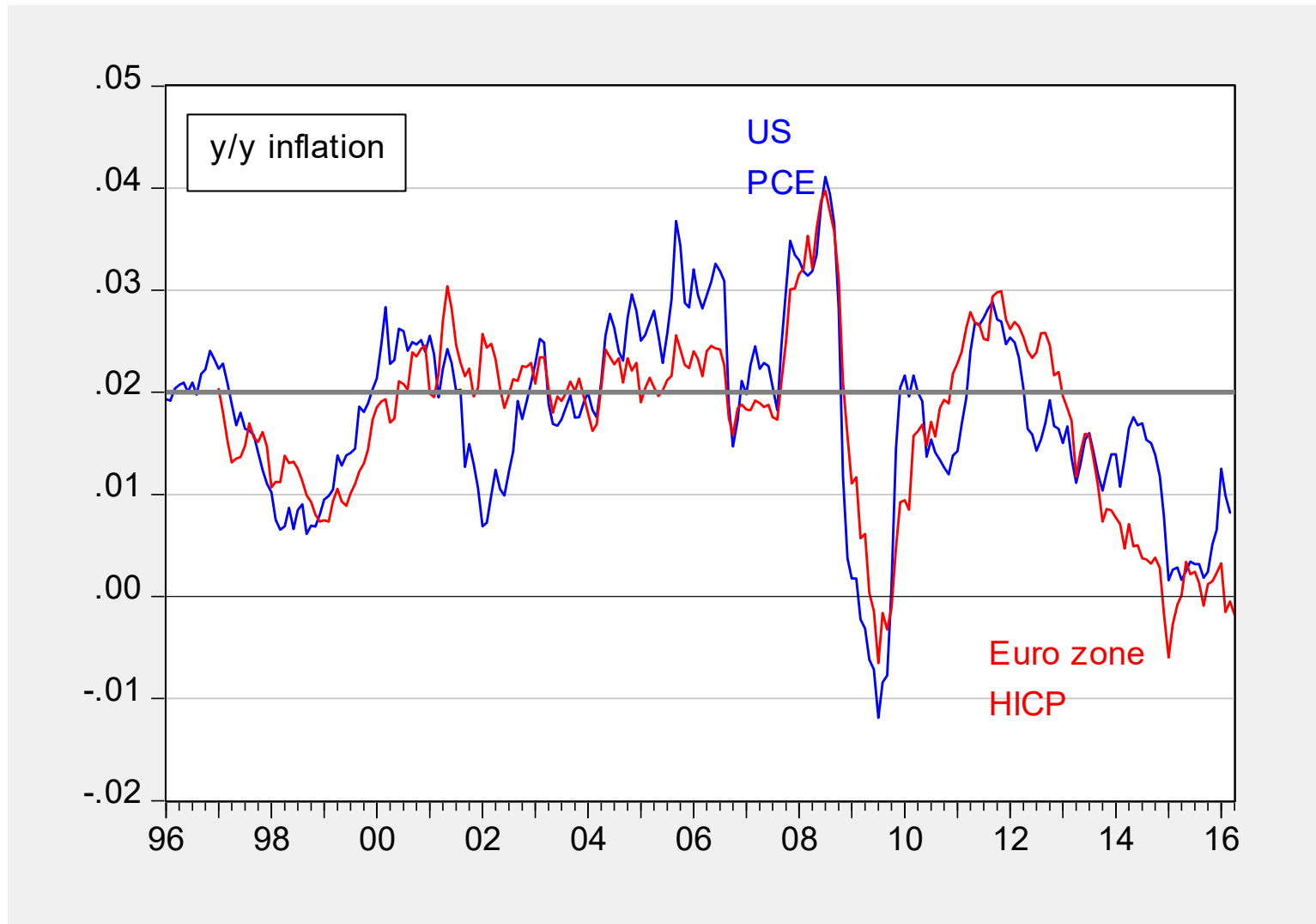
Source: IMF, World Economic Outlook (April 2015), Figure 2.3

# Diverging Inflation, Unemployment



Source: IMF, *WEO*, April 2015, Figure 2.3

# A Solution Foregone Thus Far



Source: BLS and ECB via FRED. PCE deflator for US, HICP for Euro area