

Econ 340

Lecture 17

European Monetary Unification and the Euro

(Click on exam for copy of exam, answers, etc. afterwards.)

<u>Midterm No. 1:</u>	Monday, October 21	8:30-9:50 AM	1120 Weill Hall
<u>Midterm No. 2:</u>	Monday, November 18	8:30-9:50 AM	1120 Weill Hall
<u>Final Exam:</u>	Friday, December 13	1:30-3:30 PM	1120 Weill Hall

Office Hours for the Second Midterm Exam

Prof Alan Deardorff

Thursday 11/14, 10-11 AM, 3314 Weill
Friday 11/15, 10-11 AM, 3314 Weill

GSI Huayu Xu

Tuesday 11/12, 9-10 AM, MH 1460
Wednesday 11/13, 10 AM - 12 PM, MLB 2112

GSI Review session:

Friday 11/15, 6-7 PM, Weiser Hall 260

What's Covered on the Second Midterm Exam?

NOTE: You will get two points for correctly recording:

- your name and UMID number, both on the exam booklet and on the scantron sheet so that the computer can read it,
- **AND** your **FORM NUMBER** on the scantron so that the computer can read it.

(In other words, you will lose two points if you don't do all of this.)

The second midterm exam covers all of the material after what was covered on the first midterm exam, through that assigned for Nov 11, Currency Manipulation and Currency Wars. I intend to give roughly equal treatment to each lecture topic, including the outside readings and assigned news items. Thus, the exam covers:

- The assigned portions of Gerber (see syllabus on line),
- All of the online readings assigned from Oct 16 (International Movements of Capital) through Nov 11 (Currency Manipulation), (including any pieces marked as "Other Views" but not those marked as "Optional"),
- You should also be familiar with the **news** that we will have discussed in class, including those items identified on the Assigned News Items Screenshot for weeks: Oct 7 through Nov 10.

Outline: European Monetary Unification and the Euro

- What Is It?
- History of the EMU
- Need for Convergence
- Pros and Cons of Unification
 - Why Adjustment Is Hard
 - Winners and Losers under EMU
- What Happened?
- The Eurozone Crisis

What Is It?

- The move to a common currency for a group of countries of Europe
 - Originally 12 countries
 - Now 19, with addition of Lithuania Jan 1 2015
- Purpose: To further the economic integration of Europe that
 - Began with the European Economic Community (a customs union – see next time)
 - And is today called the European Union (EU)

Euro Zone Members

Austria
 Belgium
 Cyprus
 Estonia
 Finland
 France
 Germany
 Greece
 Ireland
 Italy
 Latvia
 Lithuania
 Luxembourg
 Malta
 Netherlands
 Portugal
 Slovakia
 Slovenia
 Spain



Clicker Question

Which of the following countries does use the euro?

- a) Poland
- ✓ b) Slovenia
- c) Sweden
- d) Switzerland
- e) United Kingdom

Clicker Question

Which of the following countries does not use the euro?

- a) Cyprus
- ✓ b) Denmark
- c) France
- d) Greece
- e) Lithuania

What Is It?

- The currency is shared by all 19 countries and is not controlled by any one of them
- It is controlled by the European Central Bank (ECB), based in Frankfurt, Germany
- The group of countries is called the Economic and Monetary Union (EMU)
(Also, informally, the Eurozone)

Outline: European Monetary Unification and the Euro

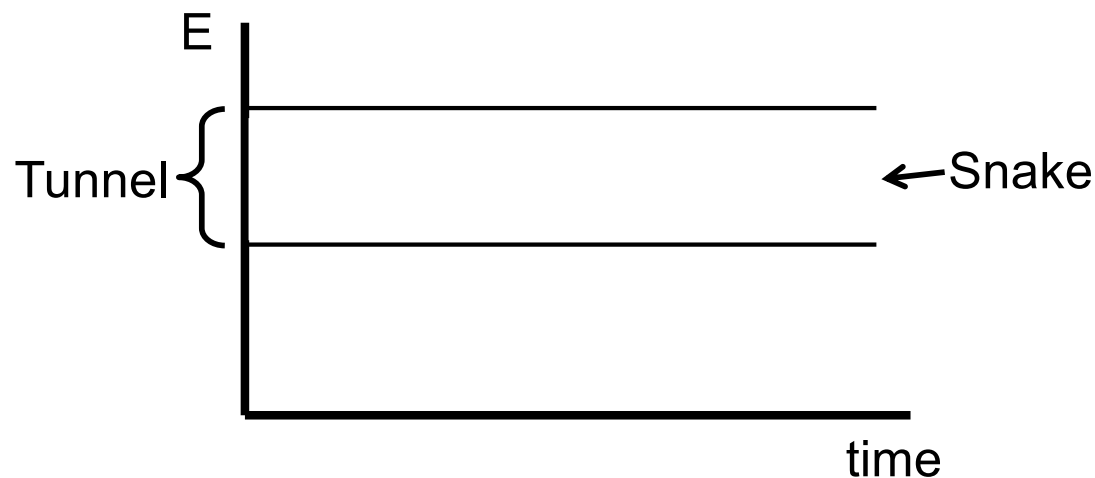
- What Is It?
- **History of the EMU**
- Need for Convergence
- Pros and Cons of Unification
 - Why Adjustment Is Hard
 - Winners and Losers under EMU
- What Happened?
- The Eurozone Crisis

History of the EMU

- Before 1973:
 - All these currencies were pegged to the US dollar
- After 1973:
 - The Bretton-Woods system collapsed and major currencies stopped pegging to US\$
 - By default, currencies began to float
 - Europe, because of its large internal trade, found exchange rate movements especially troublesome

History of the EMU

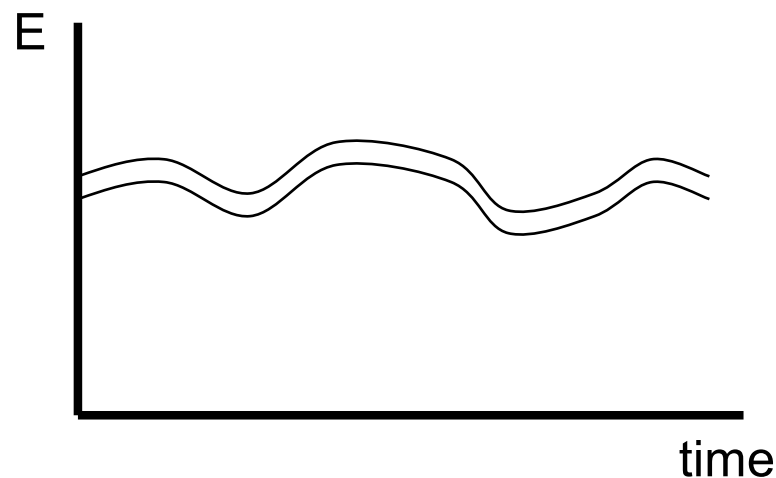
- After 1973:
 - Europe tried several arrangements to get greater stability
 - Wide-band peg to \$ with narrower peg to each other: “Snake in the tunnel”



Econ 340, Deardorff, Lecture 17:
Euro

History of the EMU

- After 1973:
 - Europe tried several arrangements to get greater stability
 - Narrow peg to each other with no peg to \$:
“Floating snake”



Econ 340, Deardorff, Lecture 17:
Euro

History of the EMU

- 1979
 - European Monetary System (EMS) established
 - Features:
 - An Exchange Rate Mechanism (ERM) of exchange rates pegged to each other within $\pm 2.25\%$ bands
 - Provision for adjusting the pegs when needed
 - A basket of currencies forming the European Currency Unit (ECU) that floated with respect to outside currencies
 - Capital controls
 - Did it work?
 - Inflation rates differed, but their differentials gradually fell
 - There were 11 currency realignments during 1979-87
- } Much like Bretton Woods

History of the EMU

- 1989: First official statement of the goal of moving toward a common currency
- 1991, December: Maastricht Treaty
 - Agreement on greater unification of member countries, forming the “European Union”
 - Also included the terms for adopting the common currency

History of the EMU

- 1992: Crisis
 - Denmark voted NO to the Maastricht Treaty
 - Speculative attacks on currencies forced some to drop out of ERM
- 1993:
 - ERM widened bands to $\pm 15\%$
 - Prospects for EMU looked bleak
 - Denmark ratified Treaty but “opted out” of the euro; UK also opted out
 - Germany was last country to ratify Maastricht Treaty

Outline: European Monetary Unification and the Euro

- What Is It?
- History of the EMU
- **Need for Convergence**
- Pros and Cons of Unification
 - Why Adjustment Is Hard
 - Winners and Losers under EMU
- What Happened?
- The Eurozone Crisis

Need for Convergence

- Difficulties of adopting common currency
 - If countries have different rates of inflation
 - High-inflation countries will lose markets to low-inflation countries
 - Exchange rates won't adjust (*a la* PPP) to correct for differences
 - If countries have different interest rates
 - Capital will flow to high-interest rate countries seeking higher return
 - Uncertainty about exchange rate won't offset this
 - Temptation to run budget deficits when able to borrow from other countries

Need for Convergence

- Difficulties of adopting common currency
 - These suggest that success with a common currency requires countries to have similar
 - Inflation rates
 - Interest rates
 - Budget deficits
 - Government debts
 - Achieving this was called “convergence” and was required in the Maastricht Treaty before a country could adopt the euro

Need for Convergence

- Maastricht Convergence Criteria
 1. National currency in ERM for 2 years
 2. Budget deficit $< 3\%$ of GDP
 3. Government debt $< 60\%$ of GDP
 4. Inflation $< 1.5\%$ above average of lowest 3
 5. Long-term interest rates $< 2\%$ above average of lowest 3
- How well were they doing?
 - Following graphs from 1998 article

Figure 1

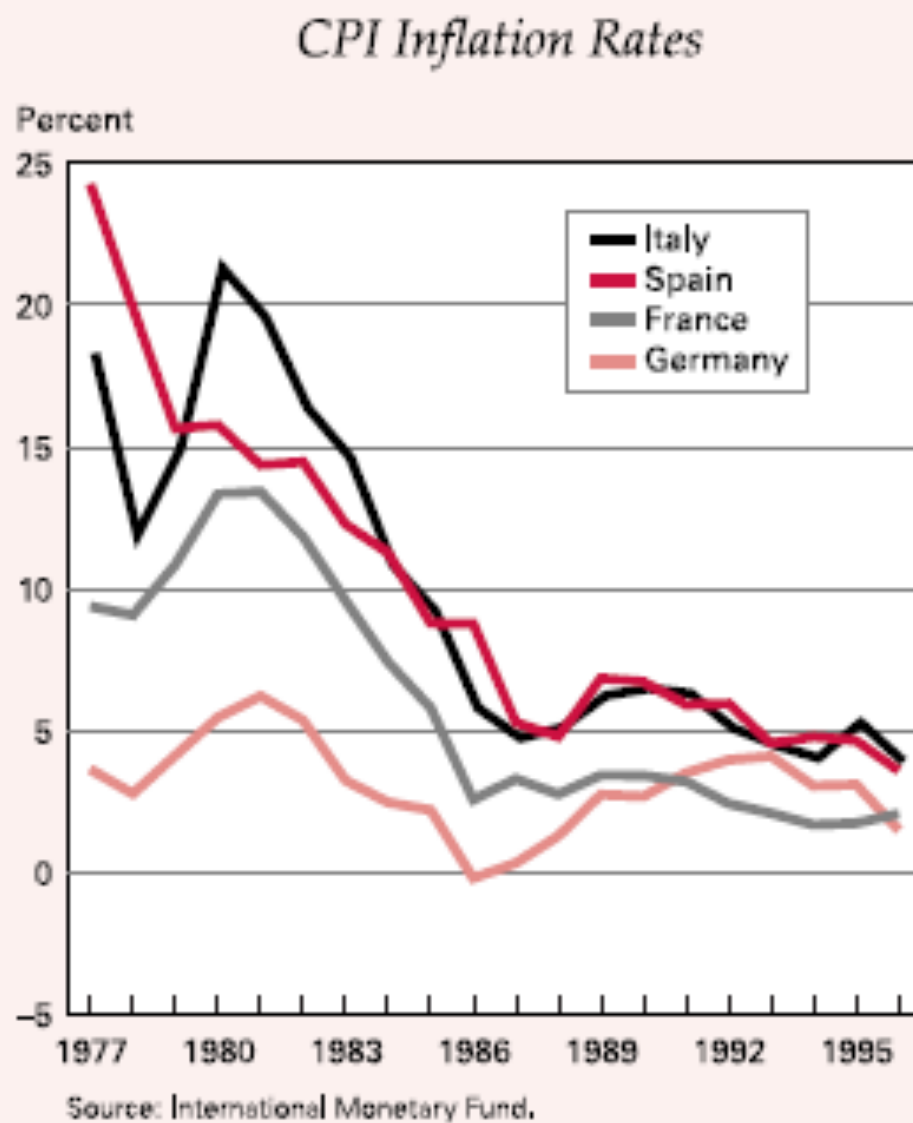
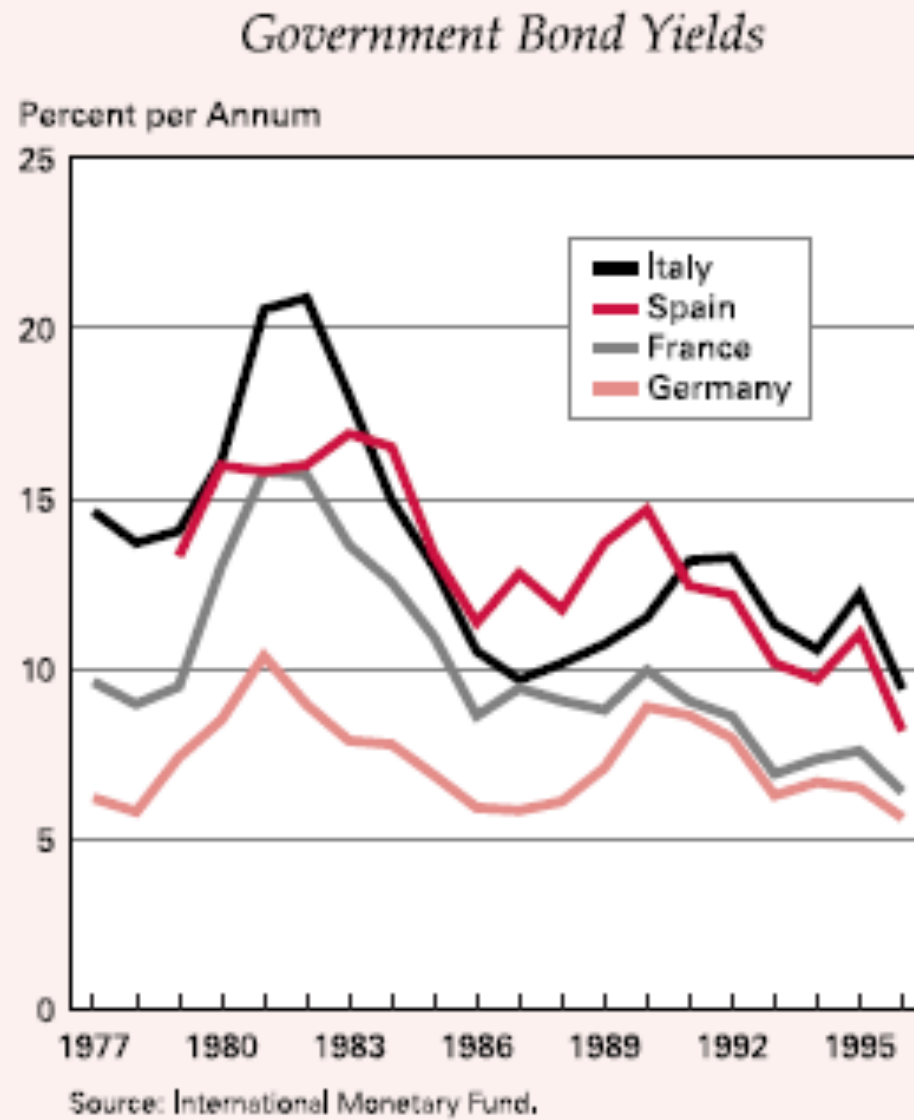
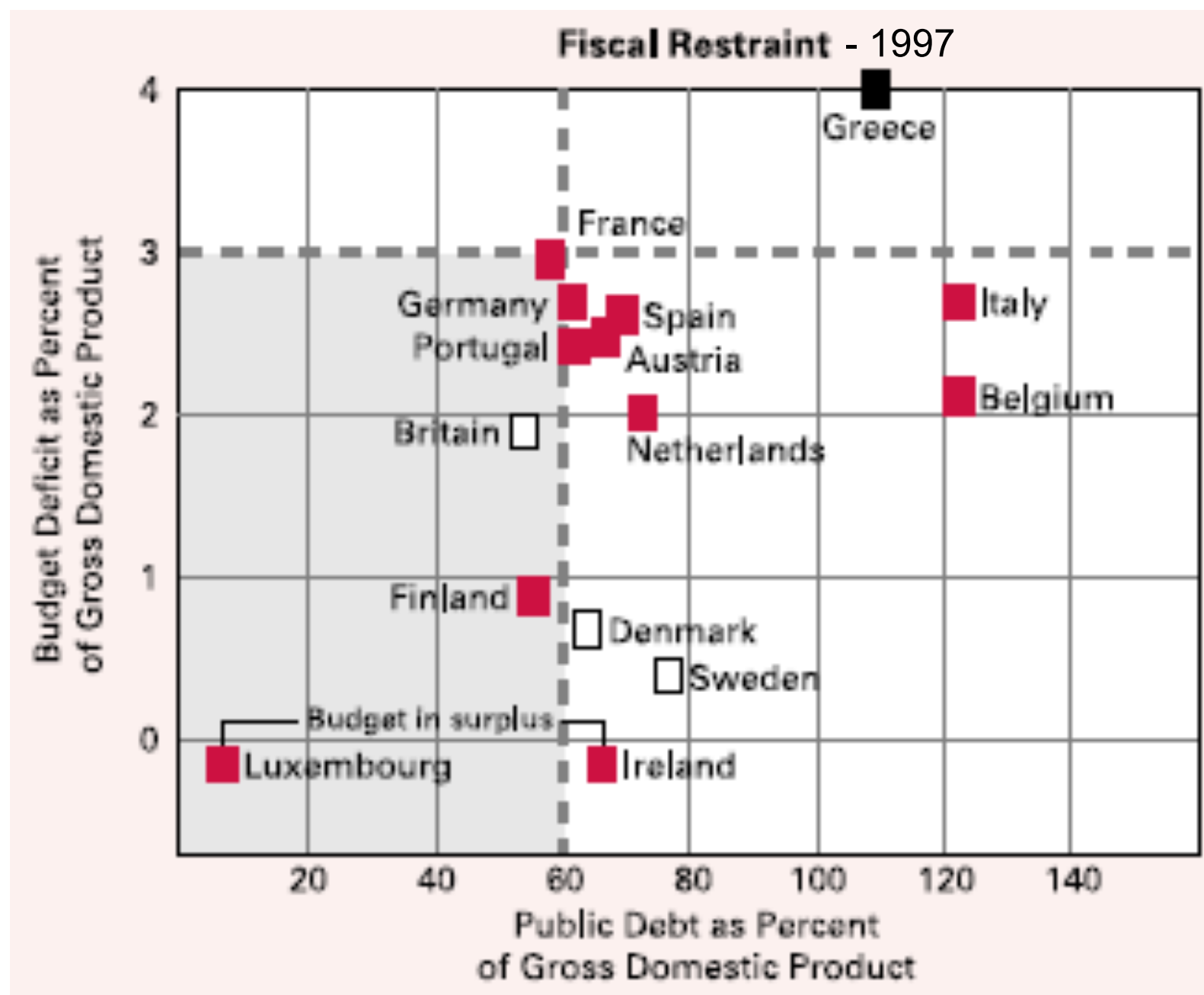
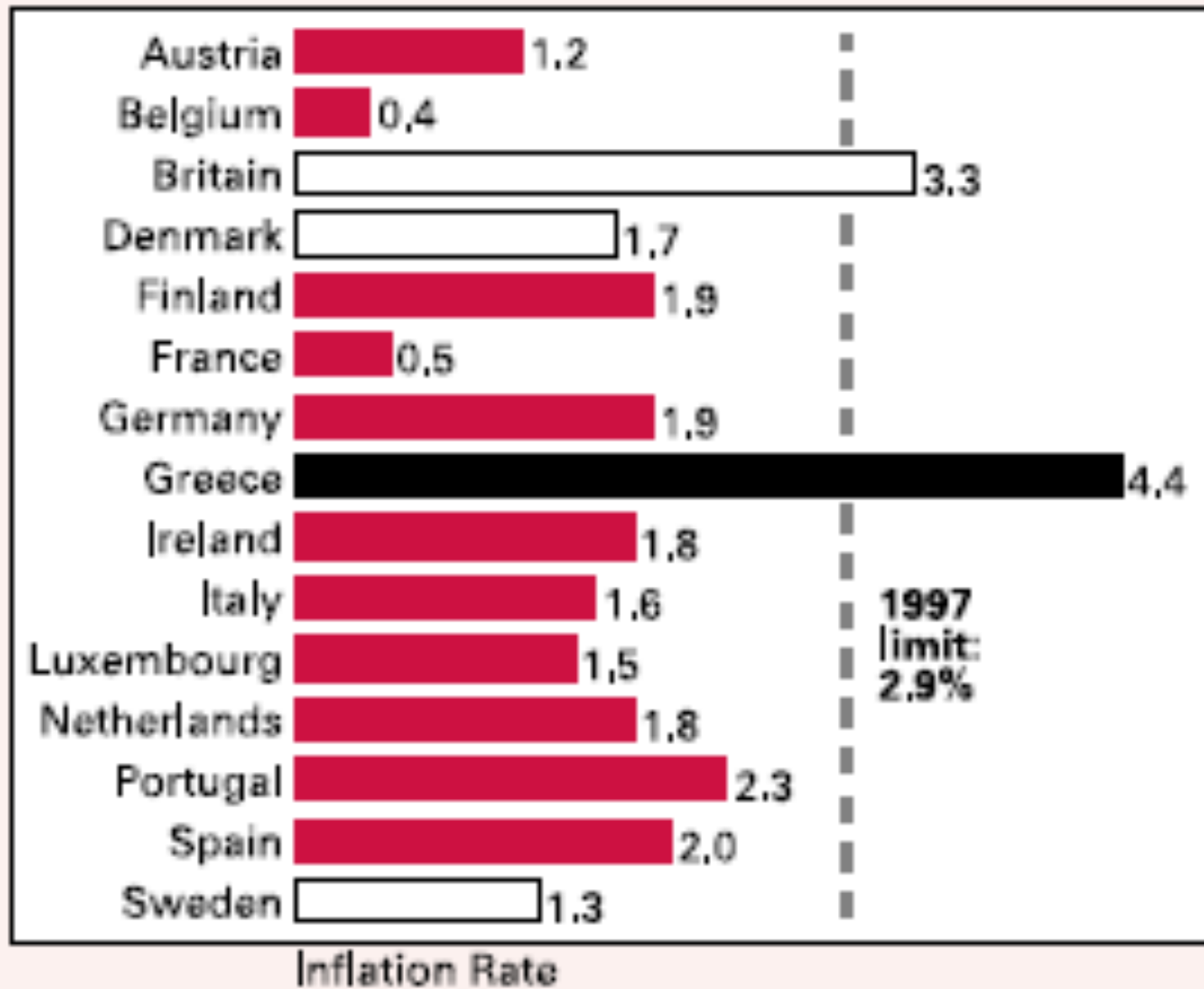


Figure 2





Price Stability - 1997



Maintaining Convergence

- Stability and Growth Pact (SGP)
 - Agreed in 1996 that members of the Eurozone would
 - Keep their budget deficits below 3% of GDP
 - Pay fines if they broke this limit

As we'll see later, this has been a problem!

Timetable

- May 1998: Membership was set
 - Based on convergence
 - All of the then 15 EU members, except
 - UK, Denmark, Sweden – who opted out
 - Greece – who failed to converge (Greece did enter soon after)
- Jan 1, 1999: Euro was launched (except notes/coins)
 - Value of euro = 1 ECU as of midnight Dec 31, 1998 = \$1.18
 - Currencies “irrevocably” linked
 - Single monetary policy: ECB (European Central Bank)
 - New public debt issued in euros
 - Financial markets started using euro
- Jan 1, 2002: Notes/coins started circulating
- Jul 1, 2002: National notes/coins retired

Euro Coins and Bills



The euro notes and coins

- Note what does not appear:
 - People
 - Actual buildings and places
- Purpose was to treat all members equally
- Result was that the currency lacks personality
- People don't much like it, and they miss their old national currencies.
- See Kulish

Members

- As of 2002, EU had 15 members, of whom 12 adopted the euro

Belgium
Austria
France
Finland
Luxembourg
Italy
Netherlands
Germany
Portugal
Ireland
Greece
Spain

BAFFLING PIGS

Members

- And 3 did not

Denmark
United Kingdom
Sweden
DUKS

Members

- Since 2002, the Eurozone has become:

**BAFFLING PIGS +
SCLELMS?**

Slovakia (2009)
Malta (2008)
Lithuania (2011)
Estonia (2014)
Latvia (2008)
Cyprus (2008)
Slovenia (2007)

Clicker Question

Which of the following was not one of the Maastricht Convergence Criteria?

- a) Budget deficit $< 3\%$ of GDP
- b) Government debt $< 60\%$ of GDP
- c) Inflation $< 1.5\%$ above average of lowest 3
- ✓ d) Growth rate of per capita GDP above 1%
- e) Long-term interest rates $< 2\%$ above average of lowest 3

Clicker Question

Which of the following was one of the Baffling Pigs, but as of 1997 had both budget deficit and public debt above the maxima specified in the Maastricht Convergence Criteria?

- a) Denmark
- b) Finland
- ✓ c) Greece
- d) Italy
- e) United Kingdom

Clicker Question

Whose face appears on the €100 note?

- a) Charles de Gaulle
- b) Benito Mussolini
- c) Benjamin Franklin
- d) Winston Churchill
- ✓ e) Nobody

Outline: European Monetary Unification and the Euro

- What Is It?
- History of the EMU
- Need for Convergence
- Pros and Cons of Unification
 - Why Adjustment Is Hard
 - Winners and Losers under EMU
- What Happened?
- The Eurozone Crisis

Pros and Cons of Unification

- Proponents expected
 - Complete the internal market
 - Improved competition & efficiency
 - Arbitrage across national borders
 - New era of prosperity
 - Stable prices
 - Fiscal discipline
 - Lower interest rates
 - thus higher investment
 - Stronger growth
 - More jobs

Pros and Cons of Unification

- Opponents expected
 - Division of the EU (baffling pigs vs. duks)
 - Loss of sovereignty
 - Little popular support
 - Regulatory & other costs
 - Difficulties of adjustment to asymmetric shocks
(As had happened before, e.g., with German unification and discovery of North Sea Oil)

Outline: European Monetary Unification and the Euro

- What Is It?
- History of the EMU
- Need for Convergence
- Pros and Cons of Unification
 - Why Adjustment Is Hard
 - Winners and Losers under EMU
- What Happened?
- The Eurozone Crisis

Pros and Cons of Unification

- Why adjustment is hard
 - Like states in the US, countries in Eurozone have
 - No exchange-rate tool
 - No separate monetary policies
 - Very limited fiscal policies (due to SGP)
 - Unlike US states, however, in Eurozone
 - Labor is less mobile across countries
 - Wages are less flexible, due to social policies
 - No mechanism for fiscal transfers among countries

Pros and Cons of Unification

- Without adjustment
 - When one country is hit with a shock that others are not (i.e., an “asymmetric shock”),
 - Its markets don’t adjust (rigid wages)
 - Its people don’t move
 - It has fewer policies to deal with this
 - Other countries don’t help

Outline: European Monetary Unification and the Euro

- What Is It?
- History of the EMU
- Need for Convergence
- Pros and Cons of Unification
 - Why Adjustment Is Hard
 - **Winners and Losers under EMU**
- What Happened?
- The Eurozone Crisis

Winners and Losers from EMU

- Winners
 - Multinational companies: their costs of operating in multiple countries were reduced
 - Europe's biggest banks were expected to gain, through consolidation across borders
 - Consumers, able to comparison-shop across borders
- Losers
 - Small firms (e.g. shops, restaurants), for whom changeover was costly, with little benefit

Clicker Question

Which of the following is not a reason why adjustment in the euro zone is difficult?

- a) No mechanism for fiscal transfers
- b) Countries cannot individually depreciate their currencies
- c) Countries are constrained from using fiscal expansion
- d) Labor market policies impede wage adjustment
- ✓ e) Labor is too mobile among countries

Outline: European Monetary Unification and the Euro

- What Is It?
- History of the EMU
- Need for Convergence
- Pros and Cons of Unification
 - Why Adjustment Is Hard
 - Winners and Losers under EMU
- What Happened?
- The Eurozone Crisis

What Happened?

- Euro started (Jan 1, 1999) at 1.18 \$/€
- Now (Nov 6, 2019) it is 1.11 \$/€
- So euro has simply fallen, right?
- Hardly! It's not that simple.

What Happened since 1999?

US \$ per €



From IMF, *International Financial Statistics*

Econ 340, Deardorff, Lecture 17:
Euro

What Happened over the Last Year?

US \$ per €



From X-Rates.com

What Happened over the Last Month?

US \$ per €



From X-Rates.com

What Happened?

- Euro fell, after its creation by about 25% to 2001
- Then it rose by 2004 back to slightly above where it started
- By 2008 it had risen to over \$1.50, only to fall in 2009
- From 2004 to 2014, it stayed at or above \$1.20
- It then fell to about \$1.10, then \$1.05 where it stayed until early 2017.
- Some thought it would go below “parity” of \$1.00, but instead it rose to over \$1.20 and is now back down to \$1.11

What Happened?

- Why all this change? I don't think we know, for the changes that happened over most of this period.
- The fall since 2014 – from over \$1.30 in 2013 to about \$1.05 two years ago – was due to
 - Weakness of the Eurozone economies
 - The ECB's use of “Quantitative Easing” to lower interest rates and stimulate the economy
 - The US Fed's interest rate increase and signals that it would raise them further
- Why did it rise, then fall, over the last two years? Some would say because of Trump

What Happened?

- Has the euro worked well for Europe?
 - There were problems, even in the early years
 - Many in Europe perceived that prices rose when converted to euros
 - Several countries broke the limit of the SGP
 - Portugal: suffered criticism but was not fined
 - France, Germany
 - » Too big even to criticize
 - » Instead EU revised the SGP
 - In the last decade, the PIGS (Portugal, Ireland, Greece, & Spain)
 - » Or PIIGS, including Italy

What Happened?

- Has the euro mattered for the US?
 - Not much
 - When the euro fell initially, it made it hard for US to compete
 - In 2007-8, with euro's rise,
 - US benefited as sellers
 - US was hurt as consumers and as tourists

What Happened?

- Has the euro mattered for the US?
 - There used to be talk of central banks switching from dollars to euros as reserves
 - So far, little sign that this is happening

Clicker Question

When did the exchange-market value of the euro reach its lowest against the dollar?

- a) 1999
- ✓ b) 2000
- c) 2008
- d) 2015
- e) 2018

Clicker Question

Which of the following countries are members of the Eurozone who have been fined for violating the Stability and Growth Pact?

- a) France
- b) Germany
- c) Greece
- d) All of the above
- ✓ e) None of the above

Outline: European Monetary Unification and the Euro

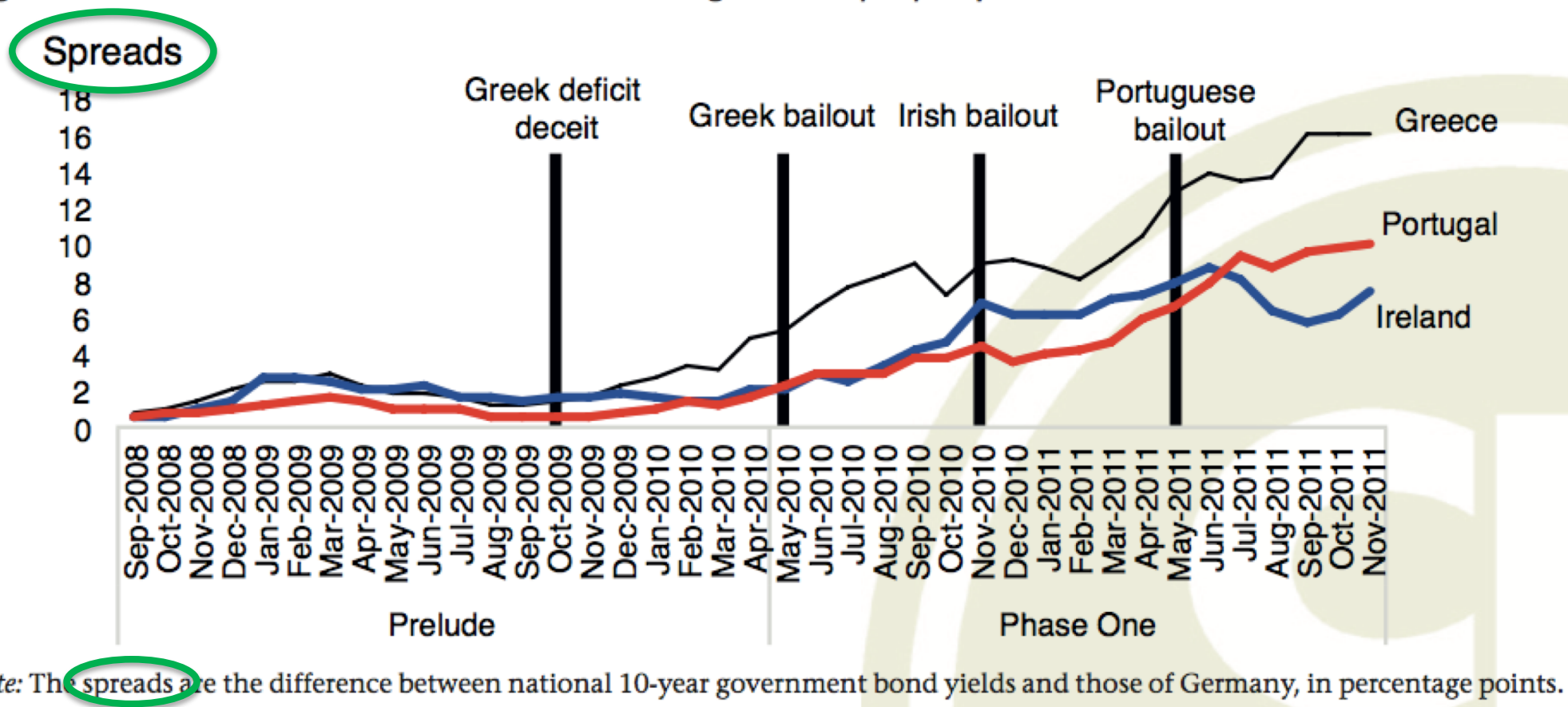
- What Is It?
- History of the EMU
- Need for Convergence
- Pros and Cons of Unification
 - Why Adjustment Is Hard
 - Winners and Losers under EMU
- What Happened?
- The Eurozone Crisis

The Eurozone Crisis

- The crisis consisted of (see Baldwin et al.)
 - News of Greek debt, and concerns about Greece's ability to manage it
 - Increased interest rates in Greece and other Eurozone countries, threatening debt problems there as well
 - Bailouts by EU, ECB, and IMF (the “Troika”)
 - Concern that the Eurozone might break up
 - Commitment by ECB's Draghi to “Do whatever it takes” to save the eurozone.

The Eurozone Crisis: Timing

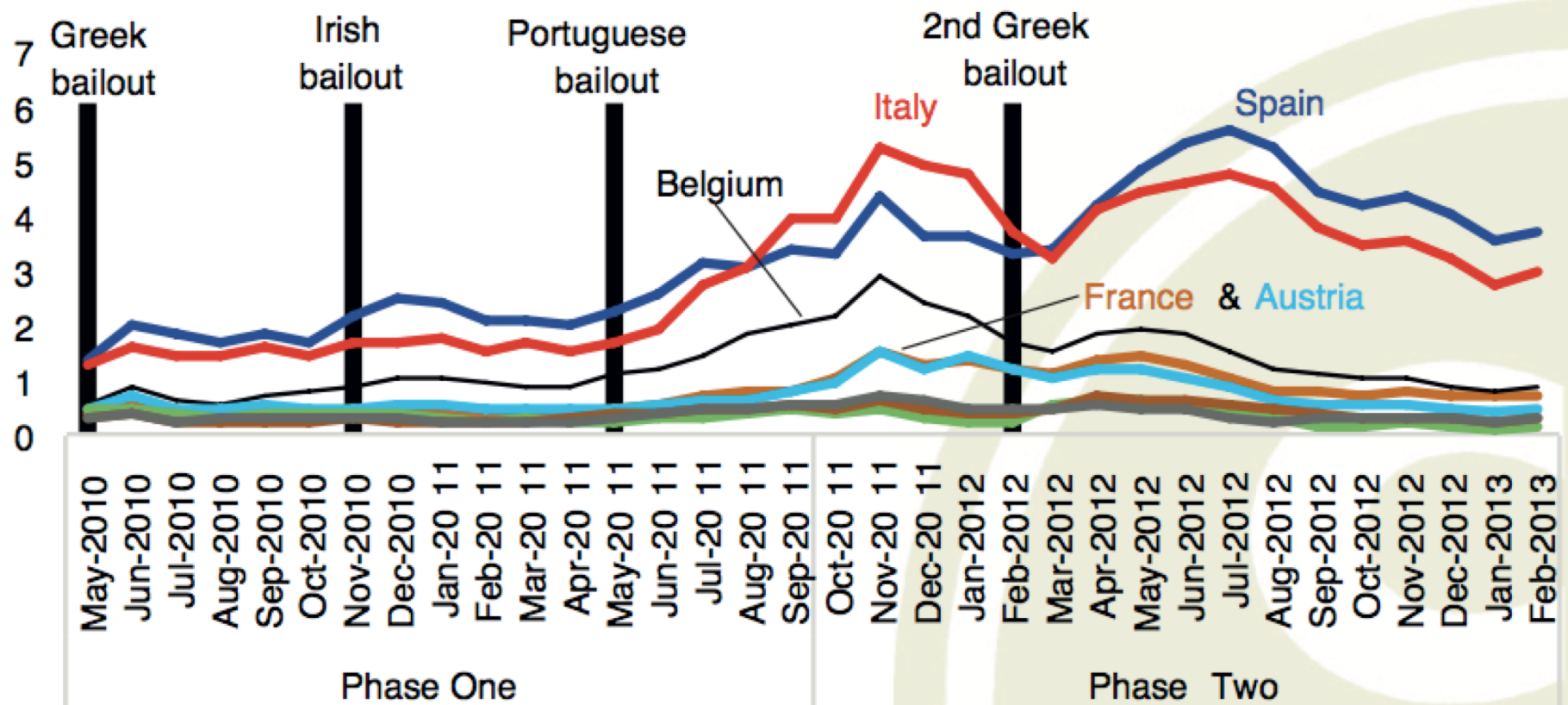
Figure 7 Prelude and Phase One of the Crisis: Contagion in the periphery



Source: Baldwin et al., "Rebooting the Eurozone"

The Eurozone Crisis: Timing

Figure 8 Phase Two: Contagion spreads to the EZ core



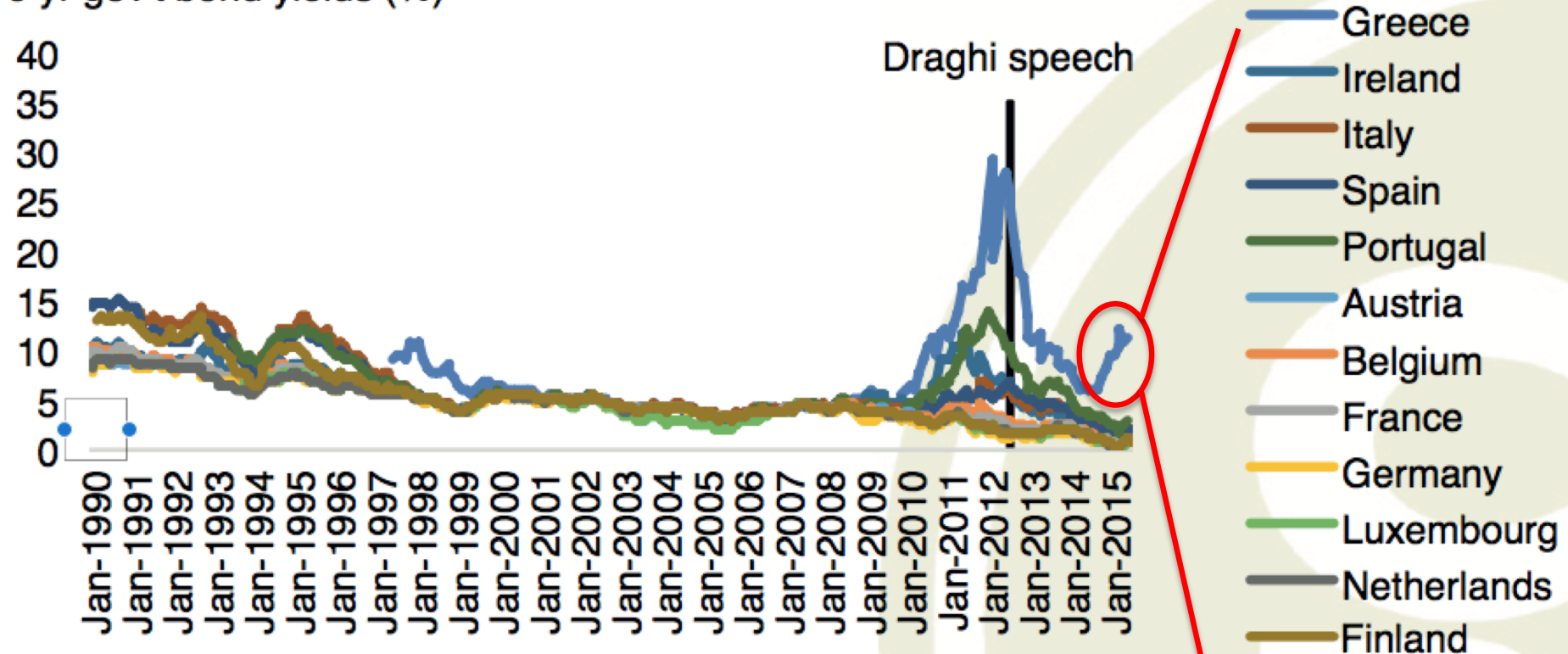
Note: The spreads are the difference between national 10-year government bond yields and those of Germany, in percentage points.

Source: Baldwin et al., "Rebooting the Eurozone"

The Eurozone Crisis: Timing

Figure 10 Yields converged after Draghi's intervention

10 yr gov't bond yields (%)



Source: Baldwin et al., "Rebooting the Eurozone"

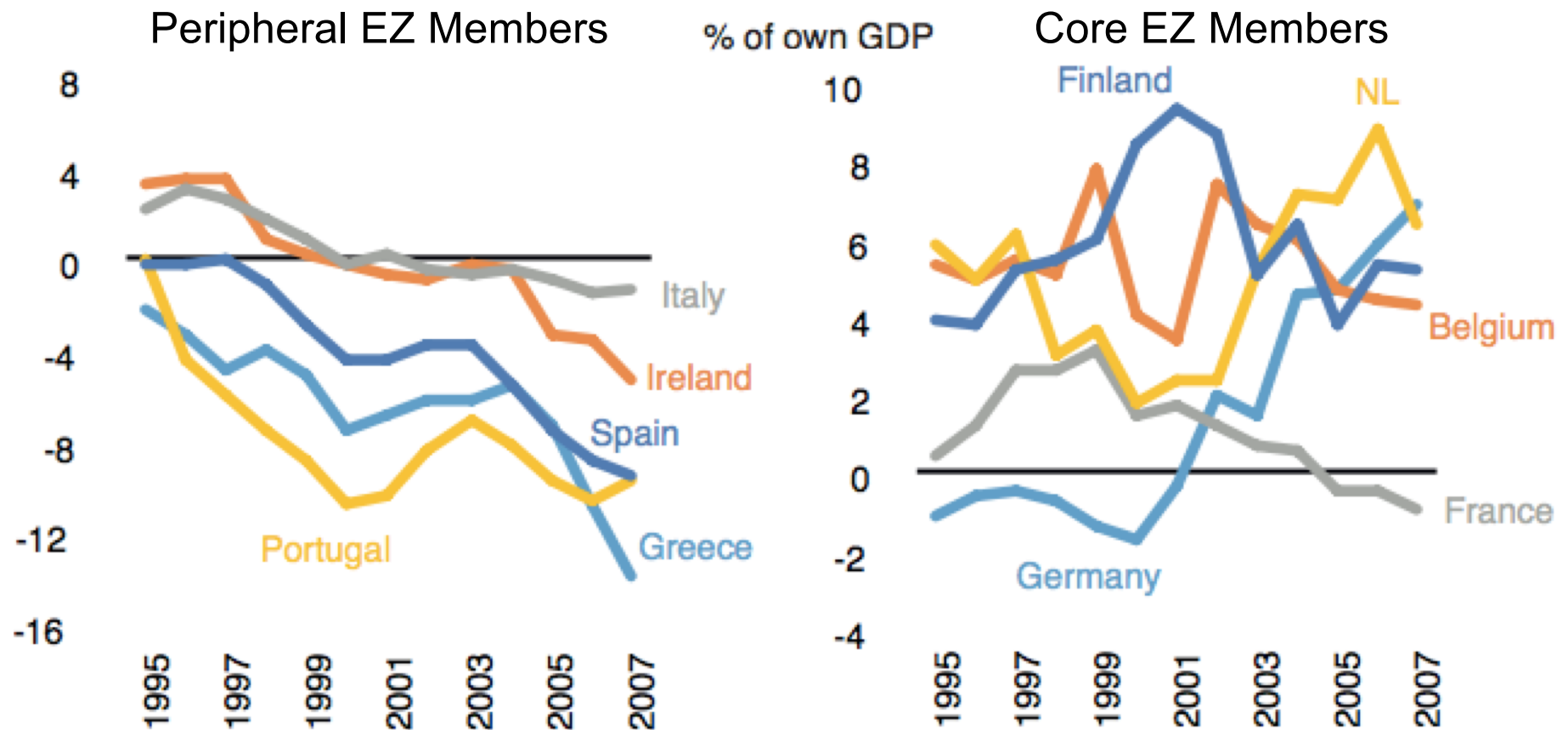
Note that Greece was not solved, and crisis may not be over.

What Happened?

- The problem of Eurozone imbalances
 - The common currency fostered current-account imbalances
 - Surplus countries lent to deficit countries
 - Without institutions (banking union, fiscal union) to assist adjustment, loss of confidence could cause “sudden stop” of creditors’ willingness to lend
 - That set the stage for crisis.

The Eurozone Crisis: Timing

Figure 2 Peripheral EZ members generally ran current account deficits while core members generally ran current account surpluses



Source: Baldwin et al., "Rebooting the Eurozone"

What Happened?

- The problem of Greece (started in 2010)
 - Greek government deficits had been over 10% of GDP
 - (compare SGP limit of 3%)
 - Greek debt rose to about 160% of GDP
 - (compare SGP limit of 60%)
 - Markets feared default; speculators attacked both Greek bonds & euro
 - EU (esp Germany) were reluctant to help (& was prohibited by Lisbon Treaty)
 - Greek austerity caused massive protests

What Happened?

- The Euro Zone today
 - In process of negotiating a mechanism to
 - Provide loans to member countries in trouble
 - Put pressure on them for austerity:
 - Cut spending
 - Raise taxes
 - Form “banking union” to safely manage bank failures
 - These mechanisms are still not in place

What Happened?

- The Euro Zone today
 - Still trying to solve the problem of Greek debt
 - Tradeoff between
 - Bailout money from others to pay it off
 - » Favored by weaker EU countries (e.g., France)
 - Cutting value of bonds to private sector holders
 - » Called “haircut” (also “bail-in”)
 - » Also called “Private-sector involvement” (PSI)
 - » Favored by stronger EU countries (e.g., Germany)

What Happened?

- The Euro Zone today
 - Fear that if not solved,
 - Greece would default
 - Speculators would attack other weak countries' bonds
 - Greece and others will be forced to leave the euro
 - These concerns seemed to have abated in 2014, but then Greece elected a government opposed to the terms of the bailout.
 - Greece is still struggling, now under another new government, and fears of crisis in the Eurozone have lessened but not disappeared

What Happened?

- The Euro Zone today, per the Smaghi reading
 - Crises are caused by
 - “Doom loop” where banks hold government debt, and doubts about the latter cause bank runs
 - “Perverse loop” (Smaghi’s term) where fear of exit from the euro causes capital outflow that makes exit more likely
 - Smaghi recommends a formal procedure for exiting the euro, and that it be combined with exiting the EU
 - That, he says, would discourage those who want to exit the euro

Clicker Question

What happened to settle the markets during the Eurozone Crisis?

- a) Rich countries agreed to bail out the poor countries
- b) The euro was allowed to float on the exchange markets
- c) The United States made large payments into the European Stability Fund
- ✓ d) The ECB President promised to do whatever it takes to save the euro
- e) Greece stopped using the euro and returned to the drachma

Next Time (after exam)

- Preferential Trading Arrangements and the NAFTA
 - What are they?
 - Their effects
 - NAFTA
 - Other