

FEDERAL RESERVE BANK *of* NEW YORK

The International Economy

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The views expressed in this presentation are those of the author and do not necessarily reflect the position of the Federal Reserve Bank of New York or the Federal Reserve System

Europe as a teaching tool

- Euro area sovereign debt crisis
 - Government debt dynamics
 - Fiscal policy
 - Balance of payments adjustments
 - Settlement imbalances inside a monetary union
 - Non-standard monetary policy

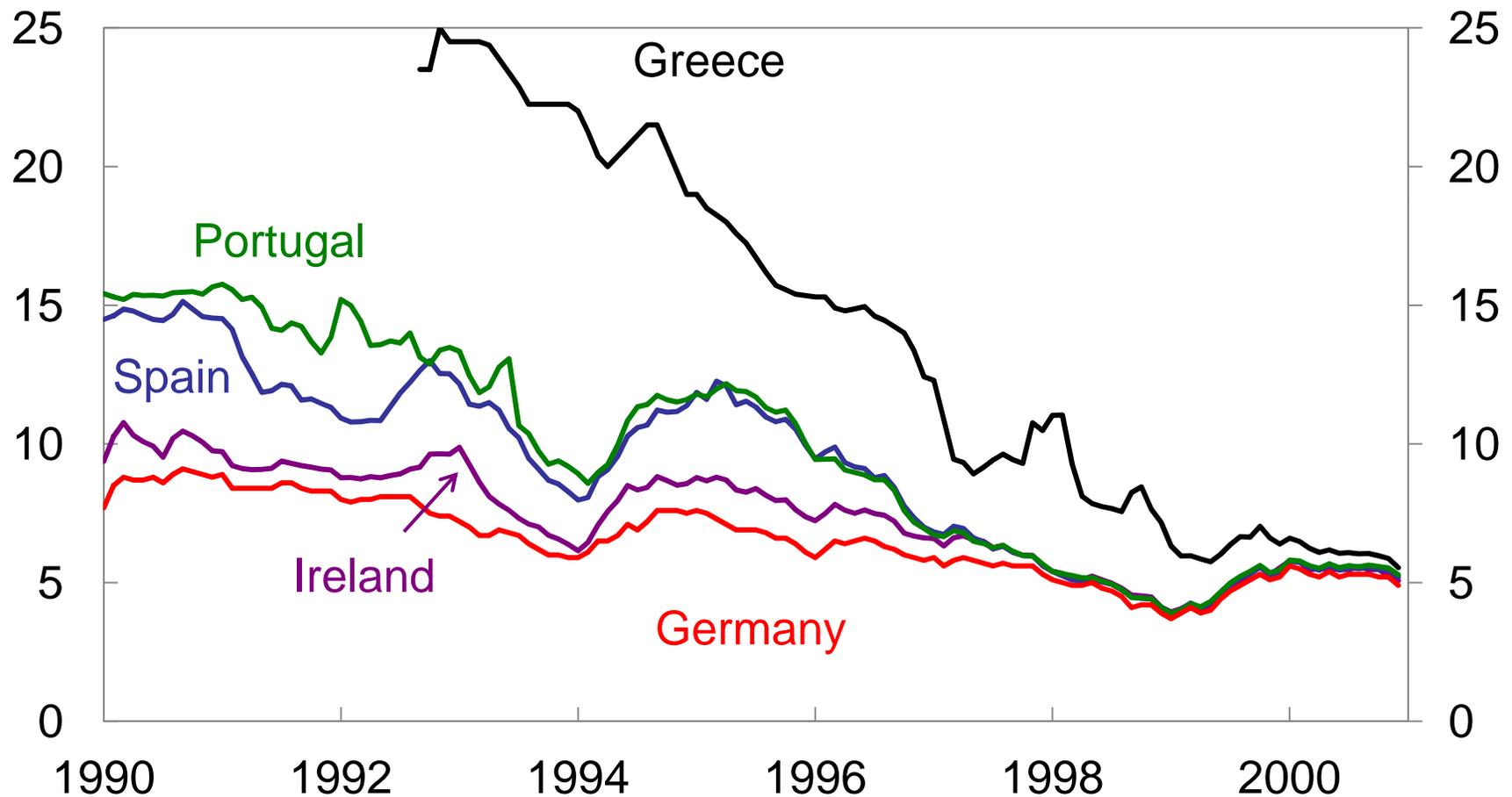
Euro area faces challenges

- Improve government debt dynamics
 - Higher interest rates create a vicious cycle
- Moderate balance of payments imbalances
 - Borrowing countries need to bring spending in line with income
 - Lending countries have to reduce dependence on borrowing countries

Membership dramatically lowered domestic yields

Ten-Year Government Bond Yields

Percent



Source: National central banks; *Financial Times*; Haver Analytics

Debt dynamics soured with jump in interest rates

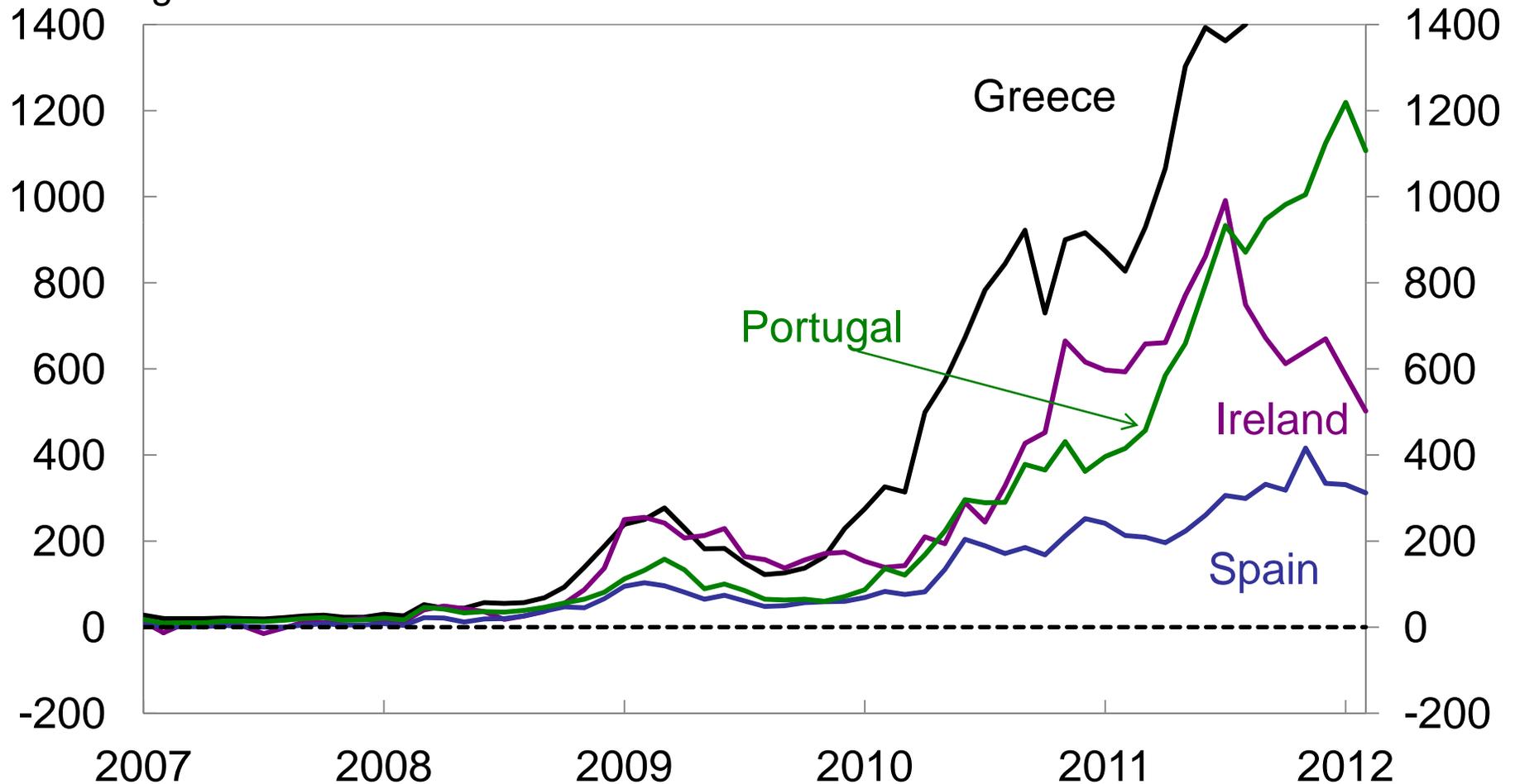
- Four variables drive debt/GDP dynamics
 - Level of debt
 - Primary fiscal balance
 - Nominal GDP growth
 - Interest rate on stock of government debt

- Interest rate greater than GDP growth requires primary surplus to stabilize ratio
 - Interest rate shock puts debt on upward trajectory
 - Efforts to improve primary balance can be offset by lower nominal income

Higher rates worsens debt dynamics

Ten-Year Government Bond Spreads

Sovereign Interest Rate- German Interest Rate

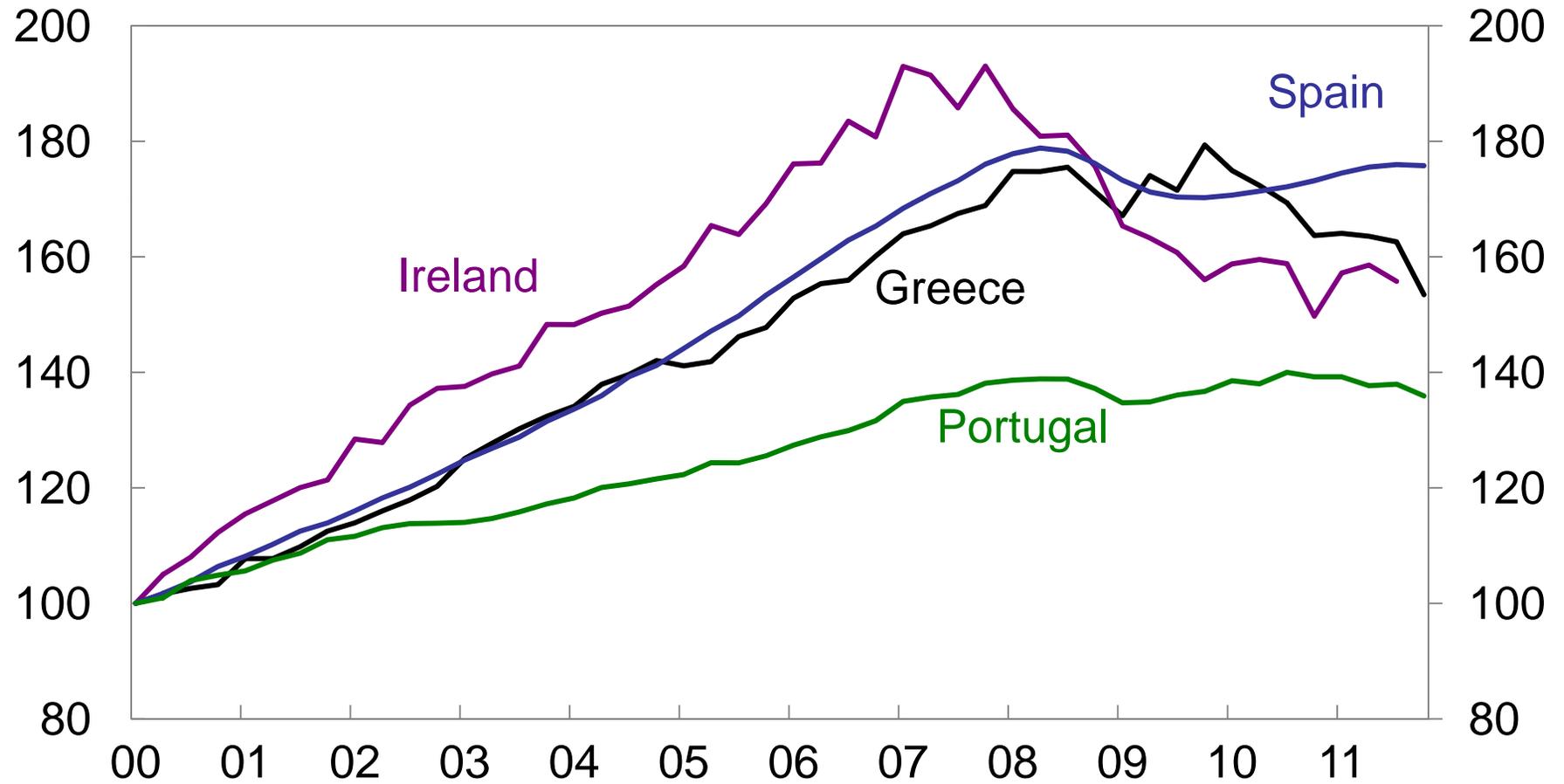


Source: National central banks; *Financial Times*; Haver Analytics

Periphery income flat or falling

Nominal GDP

Index 2000=100

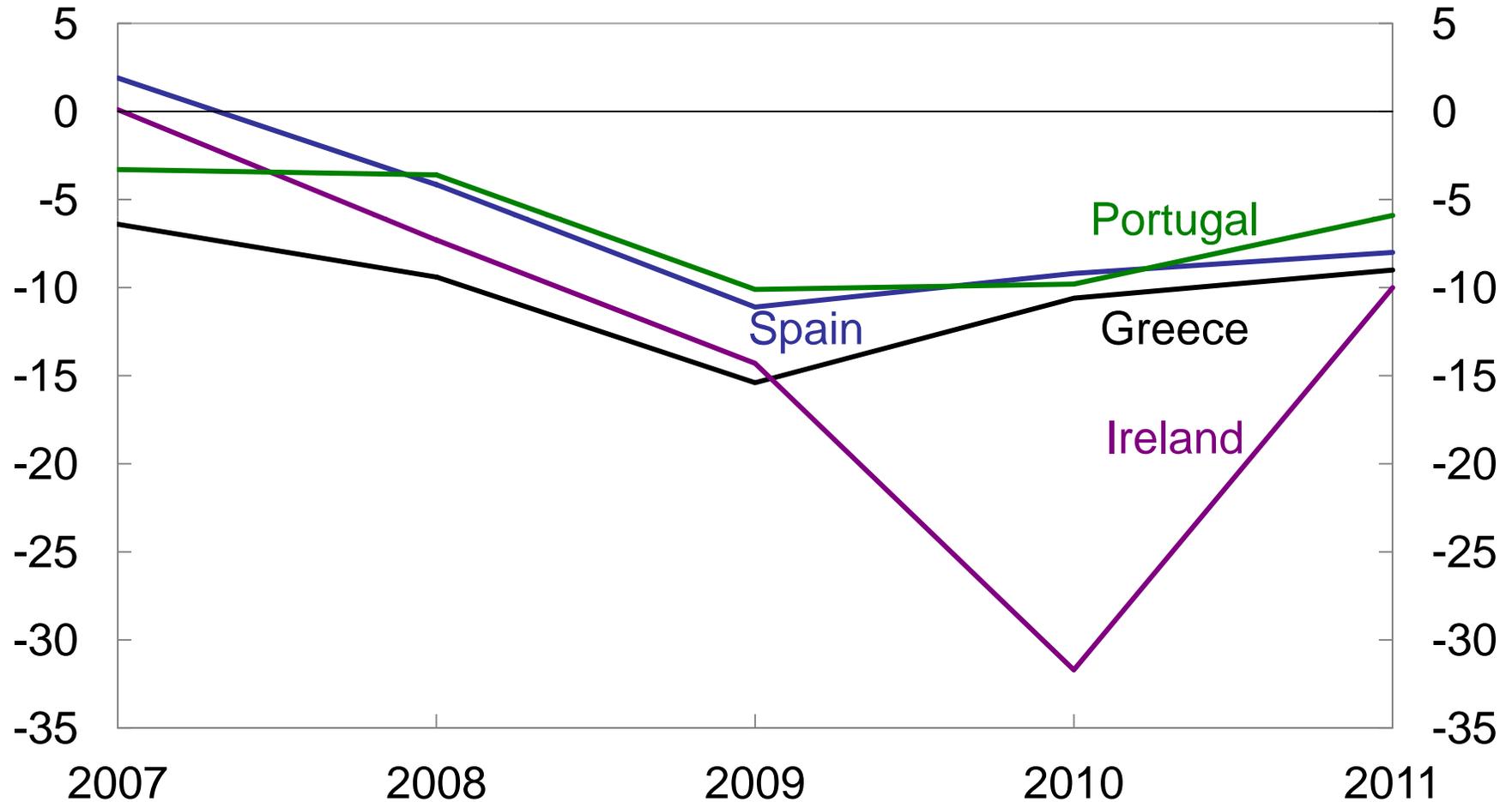


Source: Haver Analytics

Still large fiscal deficits in 2011

Fiscal Balance

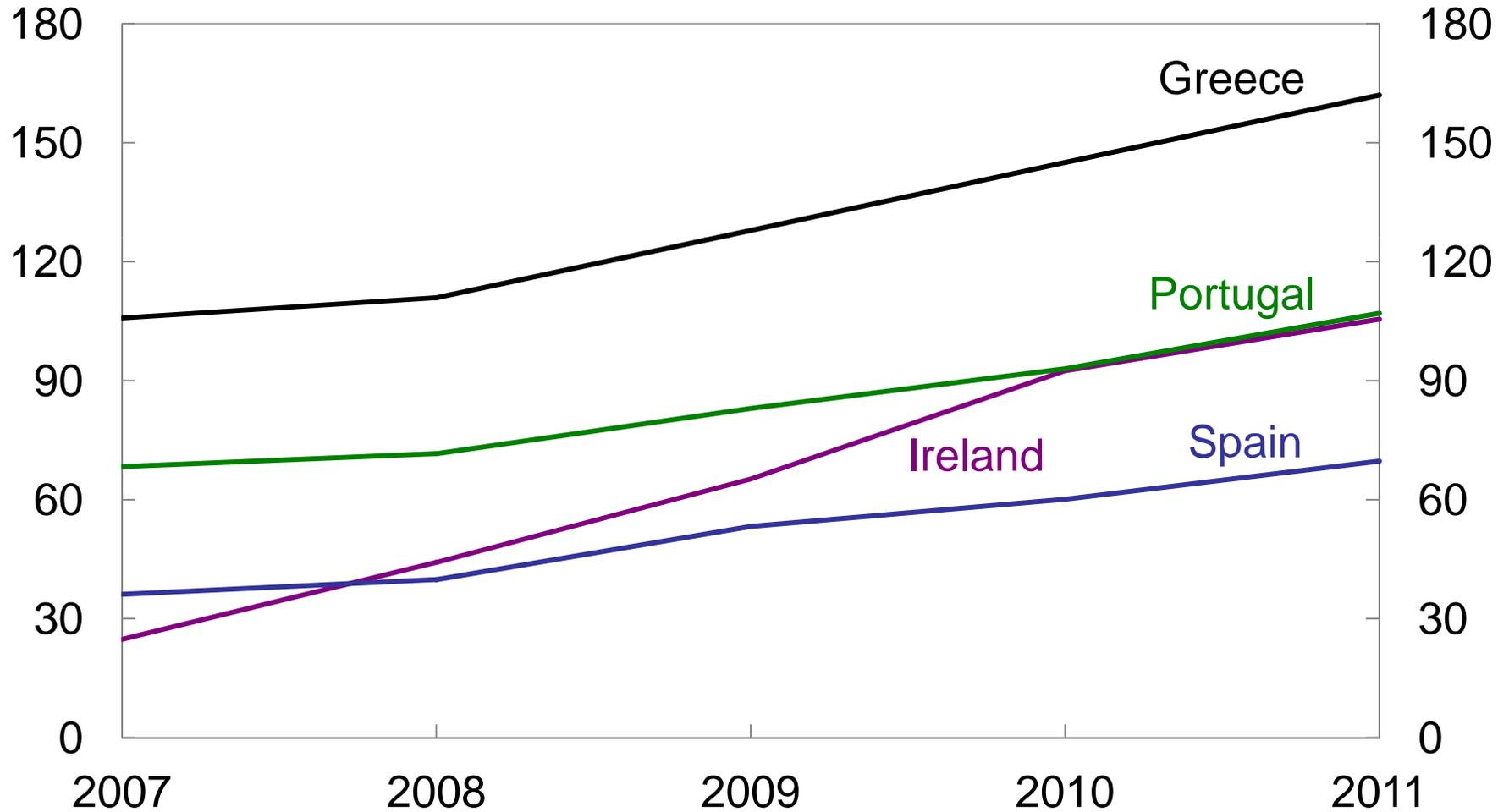
Percent of GDP



Fiscal tightening to stop upward trend

Public Debt

Percent of GDP



Understanding balance of payments deficits

- Imports greater than exports
- Investment spending greater than domestic saving
- Domestic spending greater than income
- All equal the same amount of borrowing by a country

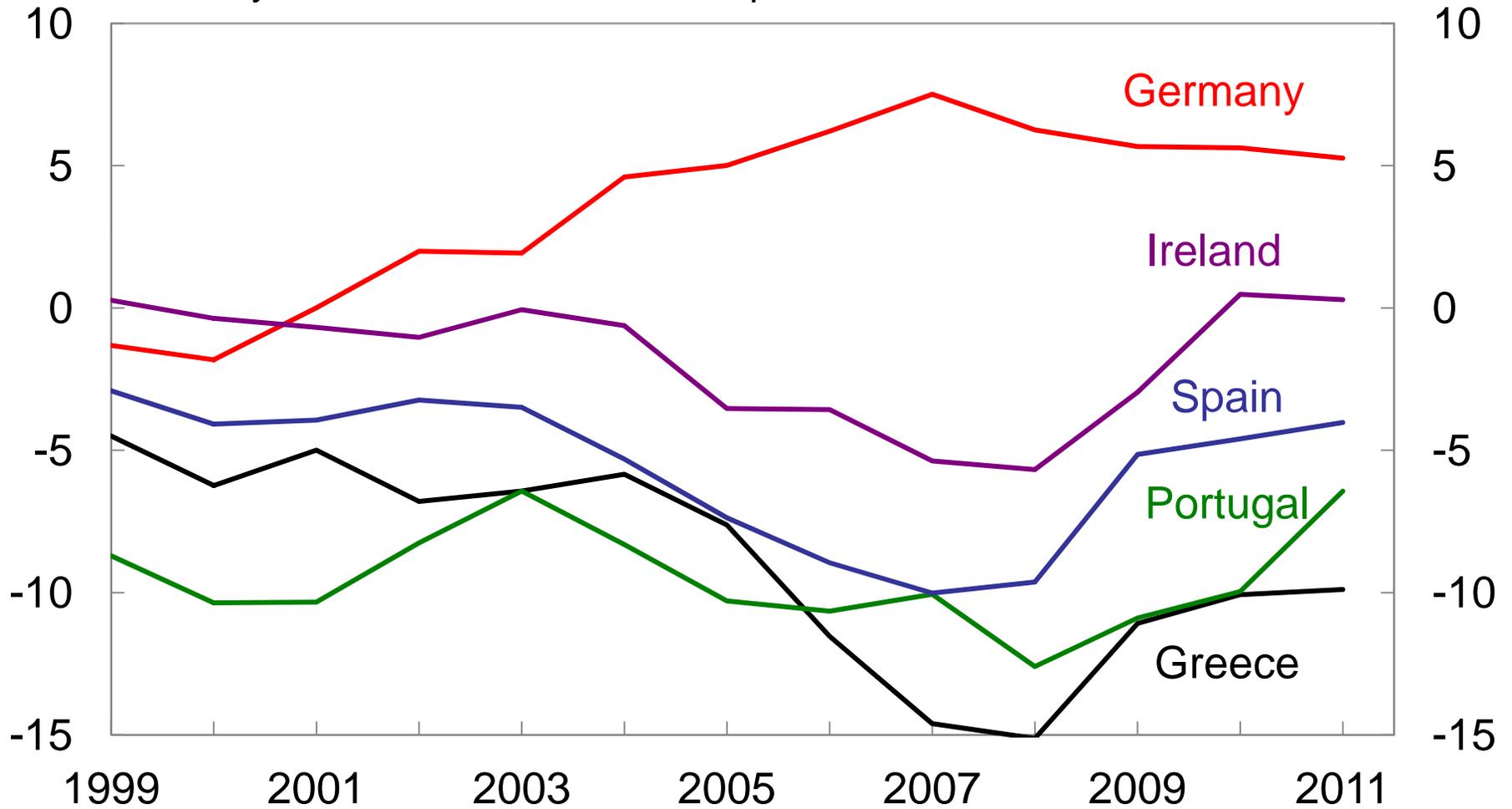
Euro area balance of payments deficits

- Membership in monetary union lowered interest rates
 - Governments can spend more and tax less
 - Facilitates a housing boom (Spain, Ireland)
 - Encourages consumption (Greece, Ireland, Spain)
- All countries were borrowing heavily before crisis

Large borrowing before the crisis

Net Saving Balances

Measured by current account balances, percent of GDP

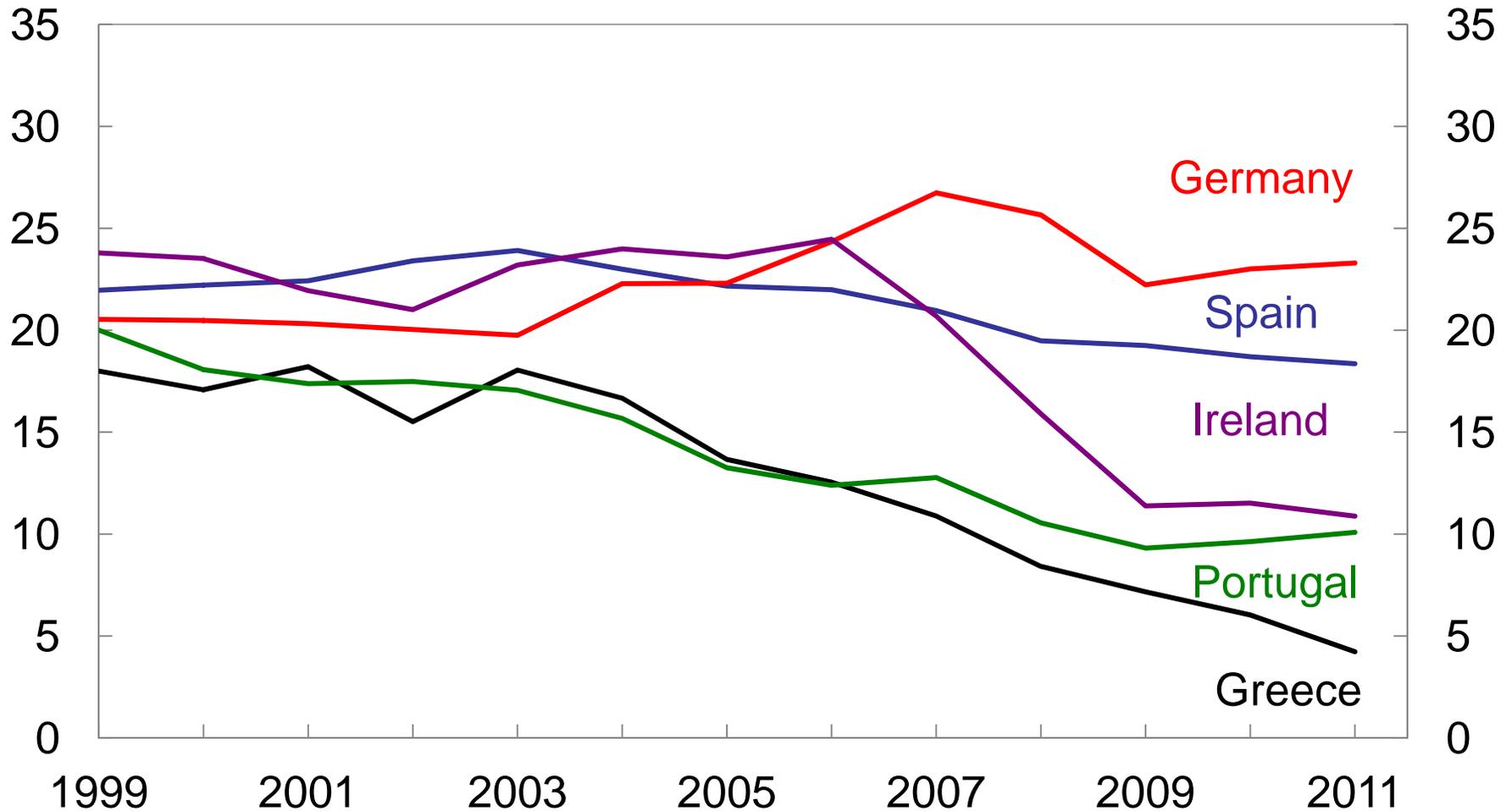


Source: Haver

Decline in periphery saving

Domestic Saving

Measured by $S = CA + I$, percent of GDP

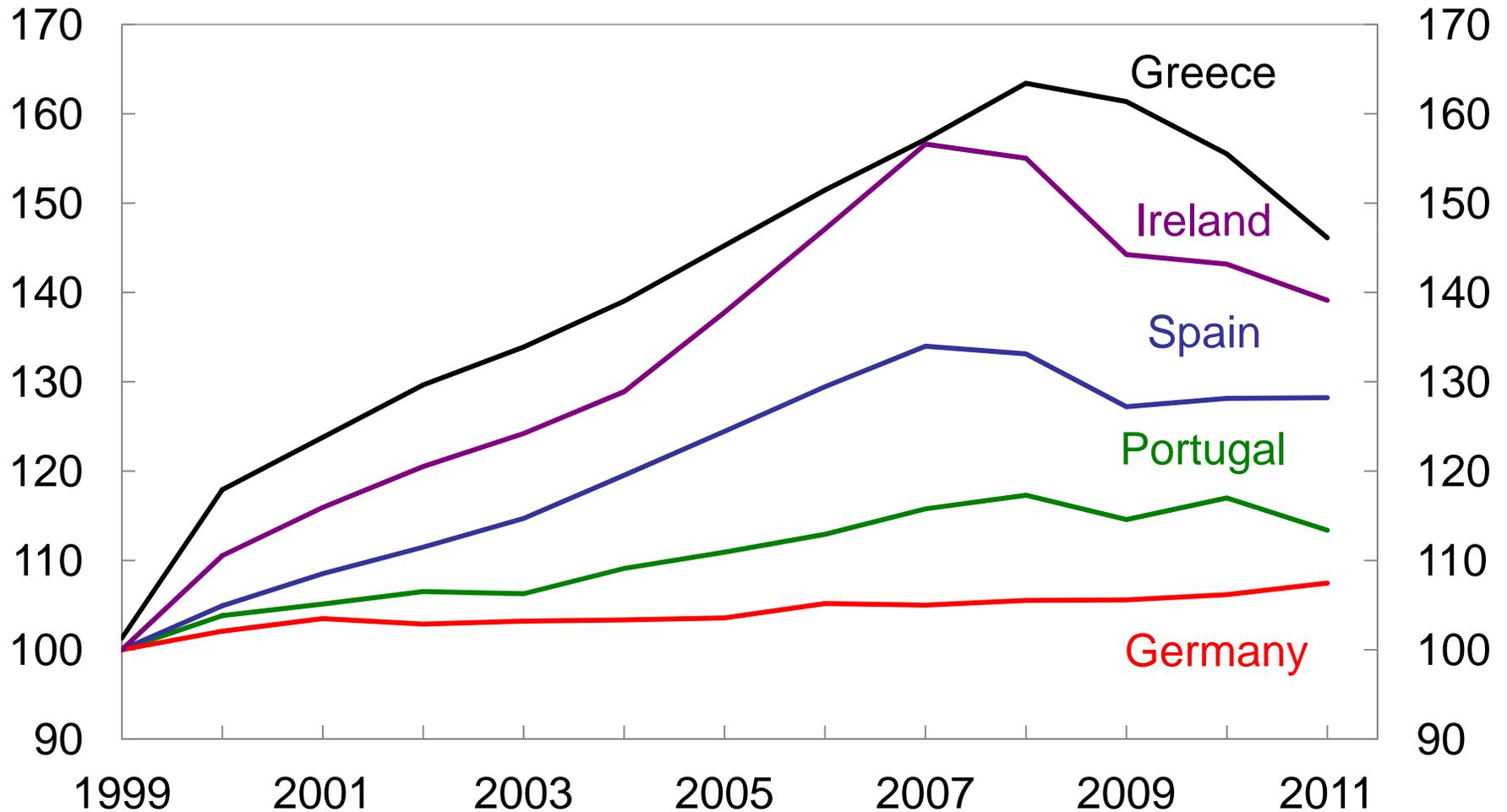


Source: Haver

Higher consumption relative to Germany

Private Real Consumption

Index: 1999=100

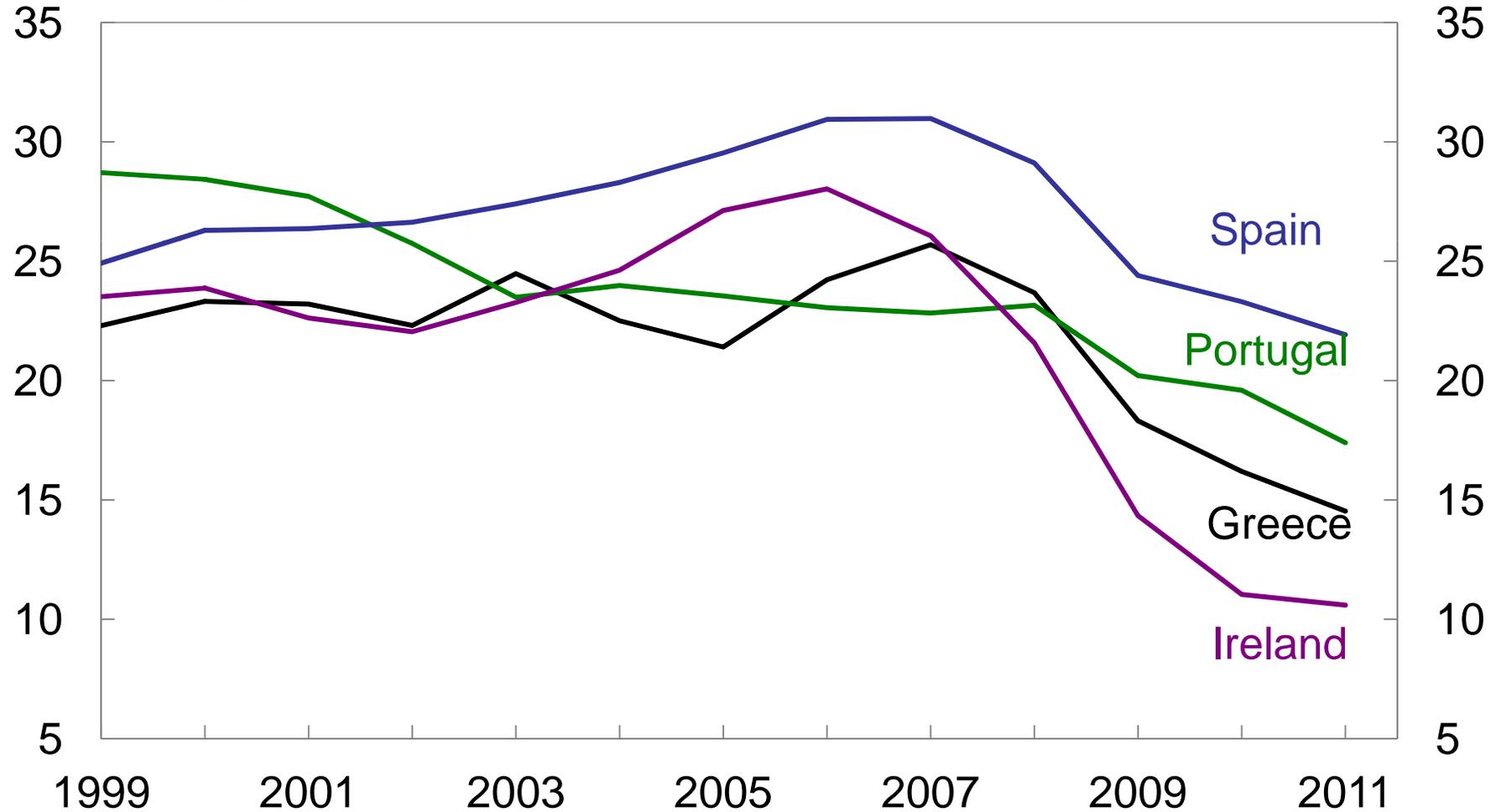


Source: Haver

Housing boom in Spain and Ireland

Investment Spending

Percent of GDP

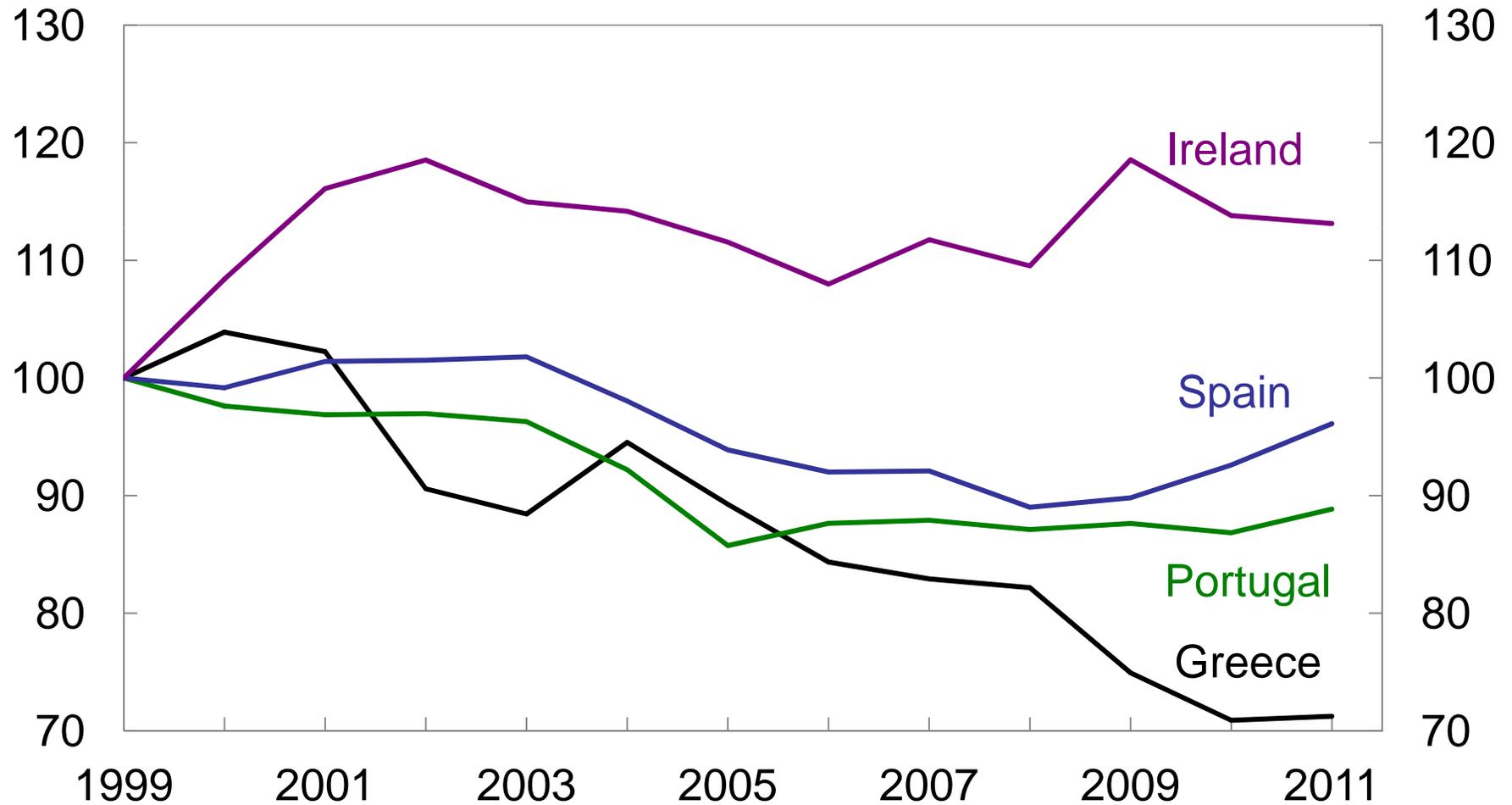


Source: Haver

Greece, Portugal, and Spain lost competitiveness

Export Market Share

Index: 1999=100



Source: OECD

Periphery countries still relying on foreign funds

- Periphery (excluding Ireland) still borrowing
 - Spending greater than income
- Investors pulling money out of periphery
 - Questions about health of banks
- Offsetting inflows from official aid and TARGET2

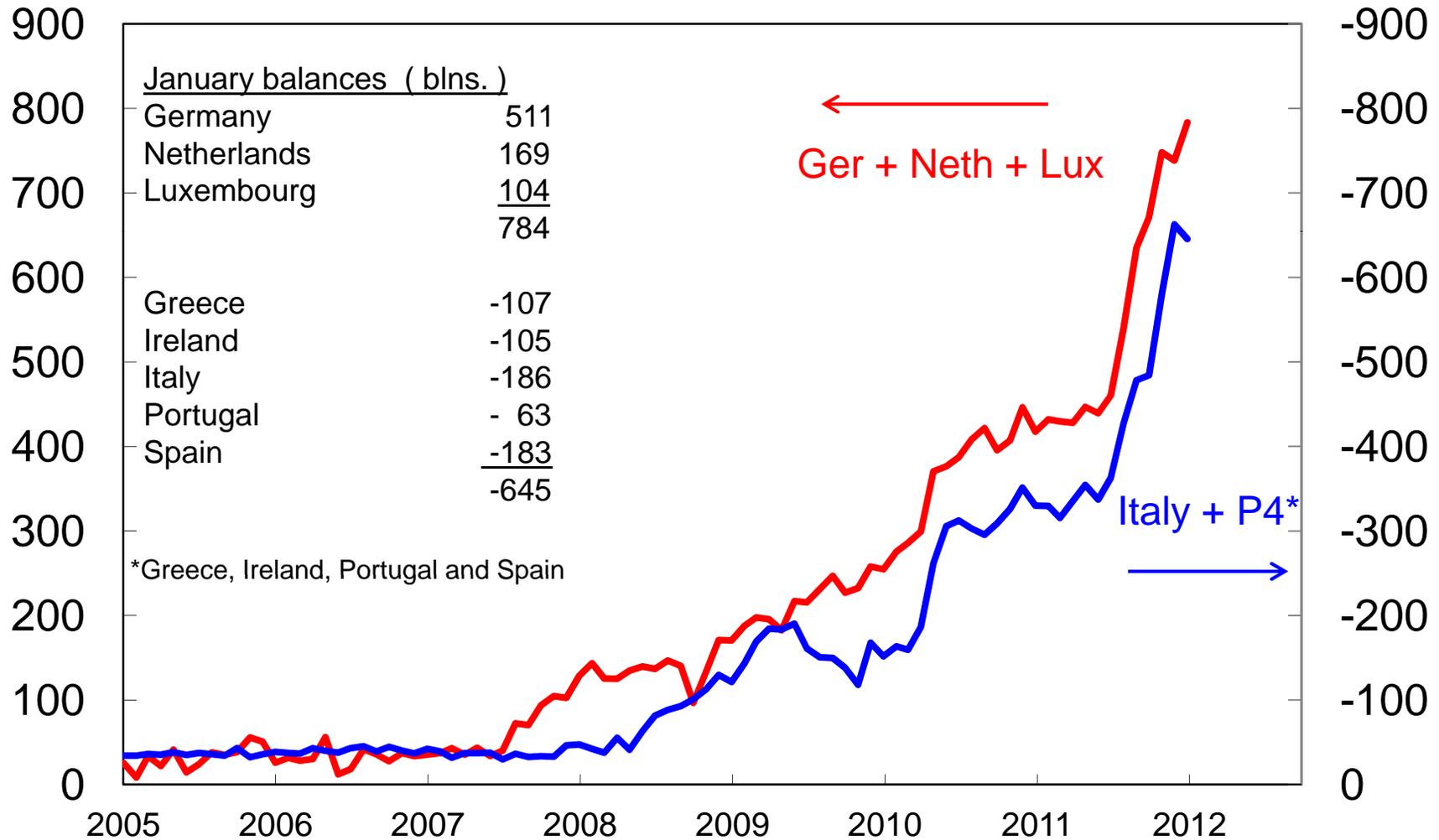
Settlement for bank outflows through TARGET2

- Cross-border net outflows of bank deposits inside the euro area clear via movements in bank reserves between central banks
 - Shift from a Greek bank to a German bank creates a Bundesbank claim on the Eurosystem and an equal Bank of Greece liability through the TARGET2 settlement system
- Periphery banks must either get more funding from their central bank or sell assets
 - Refinancing allowed for the creation of large settlement imbalances

Growing settlement imbalances in 2010 and 2011

Net Claims on the Eurosystem

Billions of euros

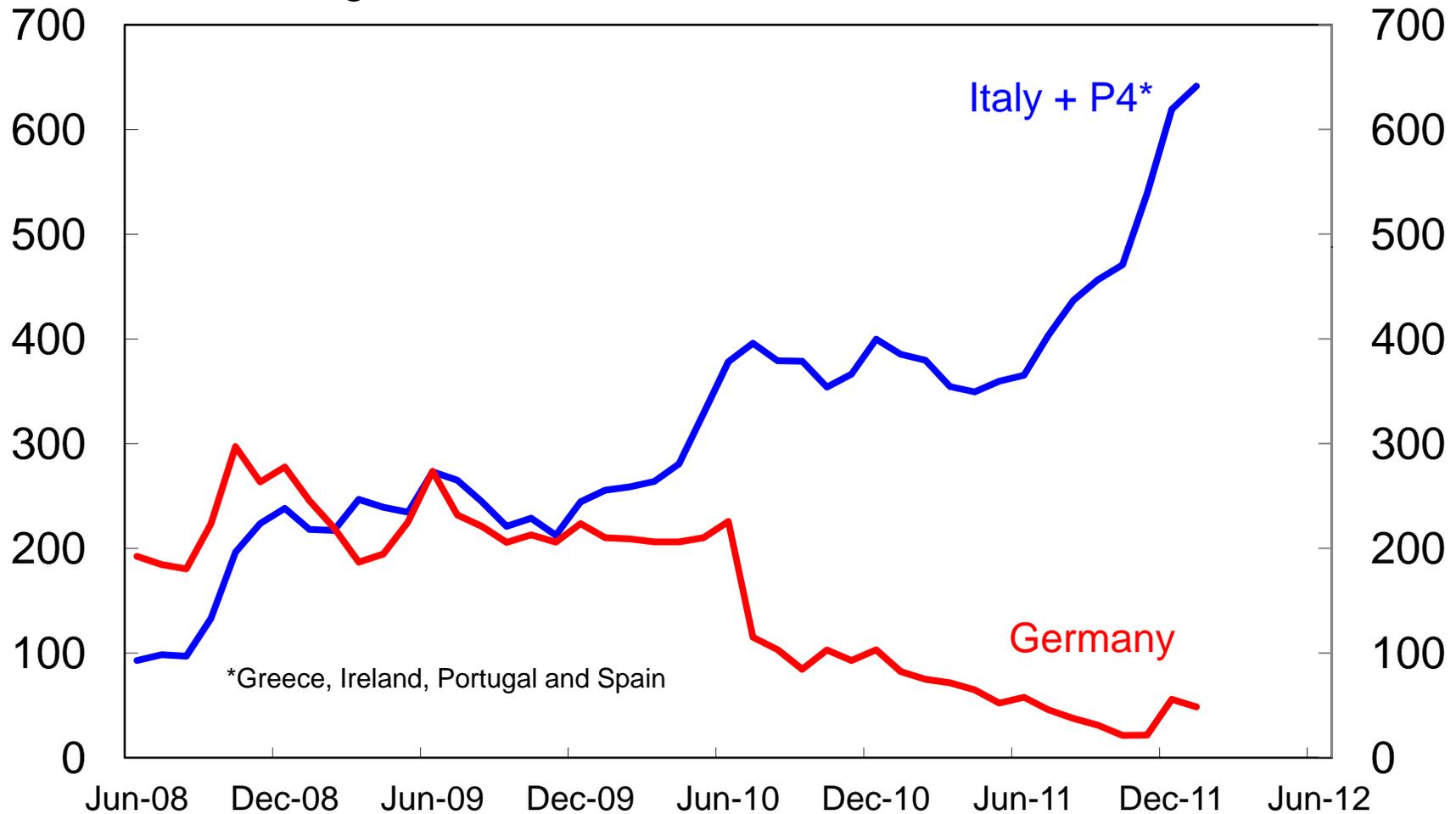


Source: National Central Banks

German banks no longer need to refinance

Bank refinancing from Eurosystem

Gross borrowing, billions of Euros



Notes: Ireland and Greece: funding from the ECB and national central banks. Ireland: domestic banks only.
Sources: ECB and national central banks

Settlement system offsets bank outflows

Periphery balance of payments financing

(billions of euros)

2011 (4-quarter sum)

$$\text{€122} = 311 + 114 + (303)$$

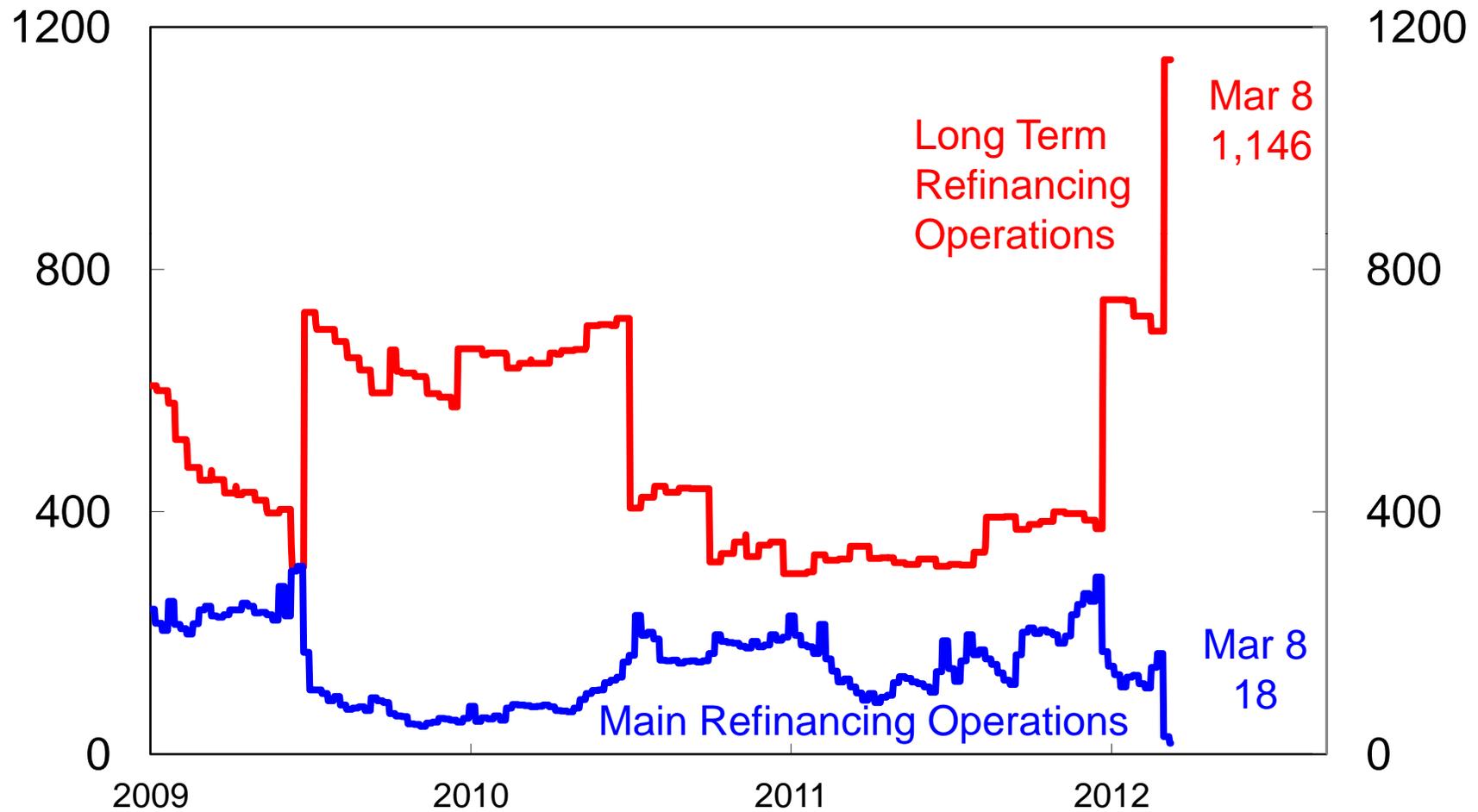
$$\text{CA Deficit} = \underbrace{\text{Target2 Financing} + \text{Program Assistance}}_{\text{Net Official Inflows}} + \text{Net Private Inflows}^{1/}$$

1 Calculated as a residual. Includes miscellaneous items and reporting errors as well as net private inflows. Data are for Greece, Ireland, Italy, Portugal, and Spain. Sources: National Central Banks, IMF, EC, authors' estimates.

ECB calmed markets with 3-year LTROs

ECB Refinancing Operations

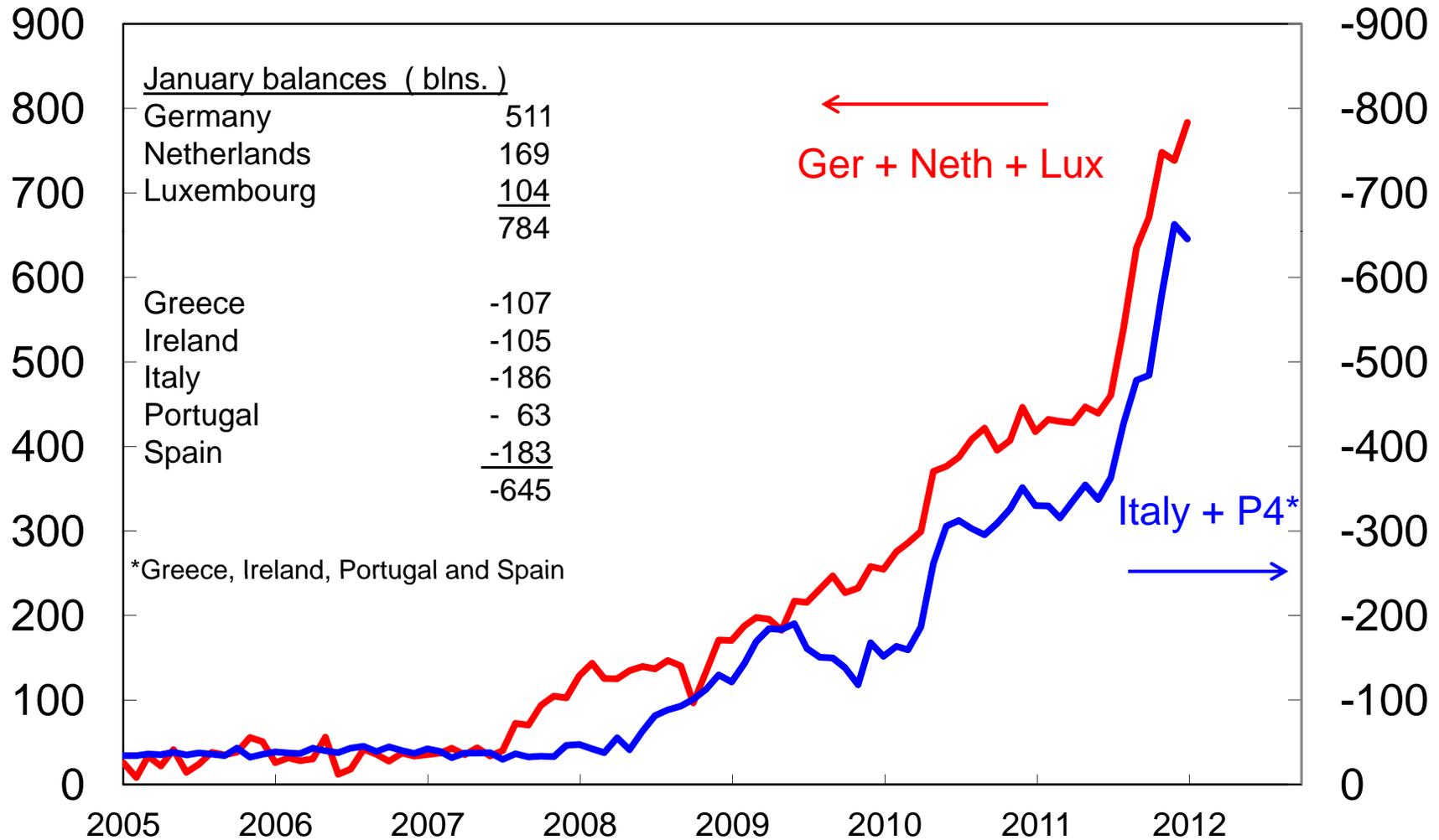
Billions of euros



LTROs may be slowing deposit outflows

Net Claims on the Eurosystem

Billions of euros



Source: National Central Banks

Europe expected to hold down foreign growth

Growth Forecast, Major Foreign Economies (percent, Yr/Yr)

	2010	2011	2012F
Euro Area	1.8	1.6	-0.3
Japan	4.0	-0.9	1.8
United Kingdom	1.8	0.9	0.5
Canada	3.2	2.3	2.0
China	10.4	9.3	8.4
Korea	6.2	3.6	3.3
Mexico	5.4	4.0	3.3
Foreign Economies	3.8	2.5	1.8

Consensus Forecasts

Reference

Background for this presentation can be found in

- “Saving Imbalances and the Euro Area Sovereign Debt Crisis” by Matthew Higgins and Thomas Klitgaard in the FRBNY *Current Issues in Economics and Finance*
- “Central Bank Imbalances in the Euro Area” by Matthew Higgins and Thomas Klitgaard in the FRBNY Liberty Street Economics Blog