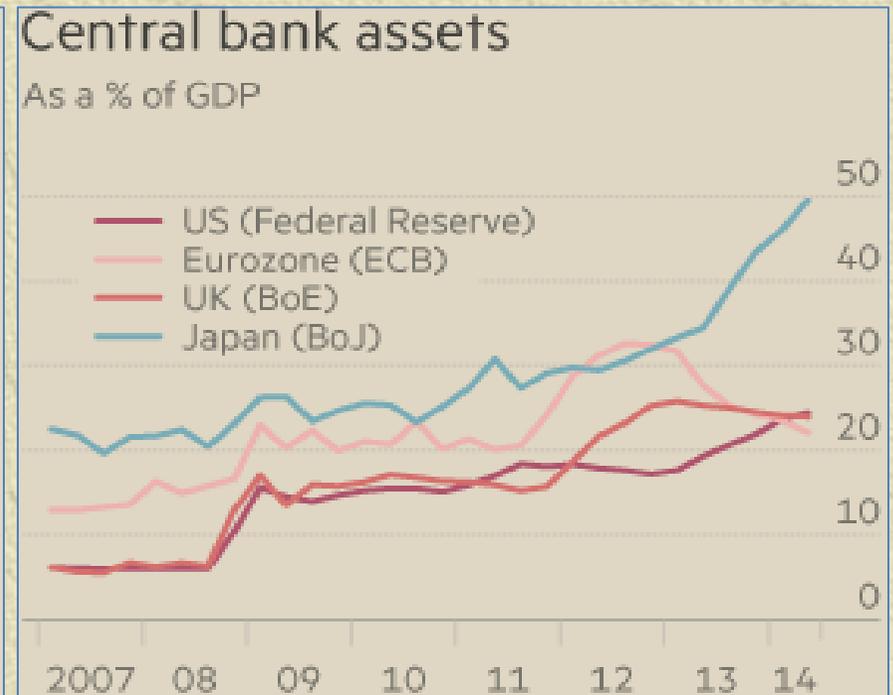
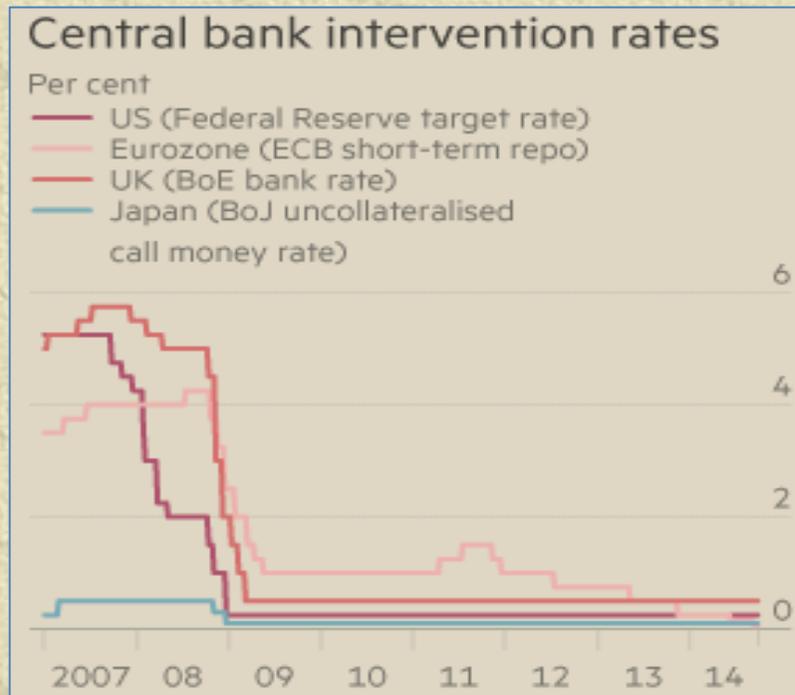


Domestic Macro Concerns, . . . continued

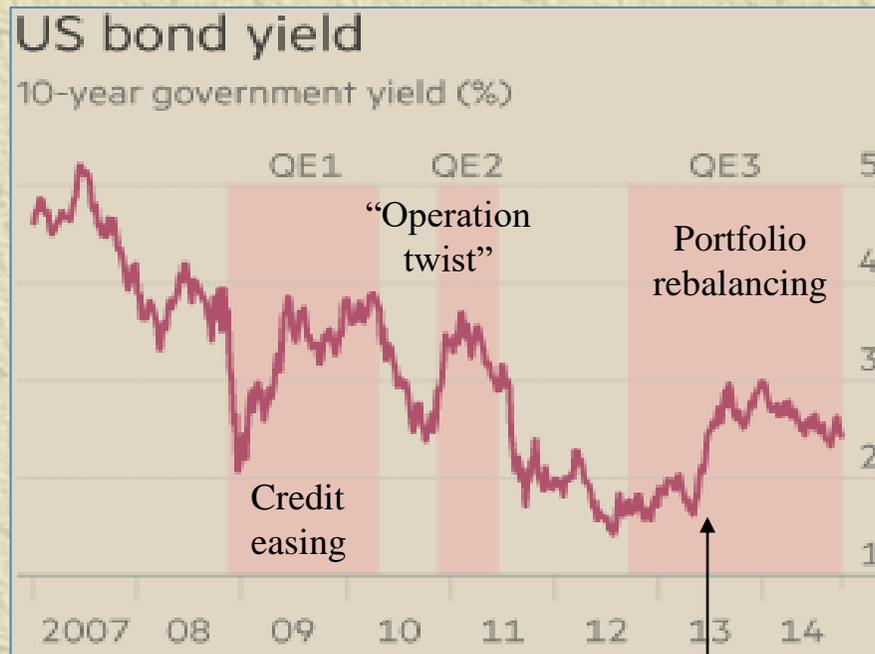
✦ Monetary policy: orthodox vs unorthodox

- ◆ Traditional MP (orthodox)
- ◆ Unorthodox MP: QE and/or zero or neg i-rates
 - QE: large-scale asset purchases
 - Asset purchases as % GDP



Domestic Macro Concerns, . . . continued

- ◆ QE forms: ↑ asset purchases to stop ↓ i
 - Credit easing
 - “Operation twist”
 - Portfolio rebalancing

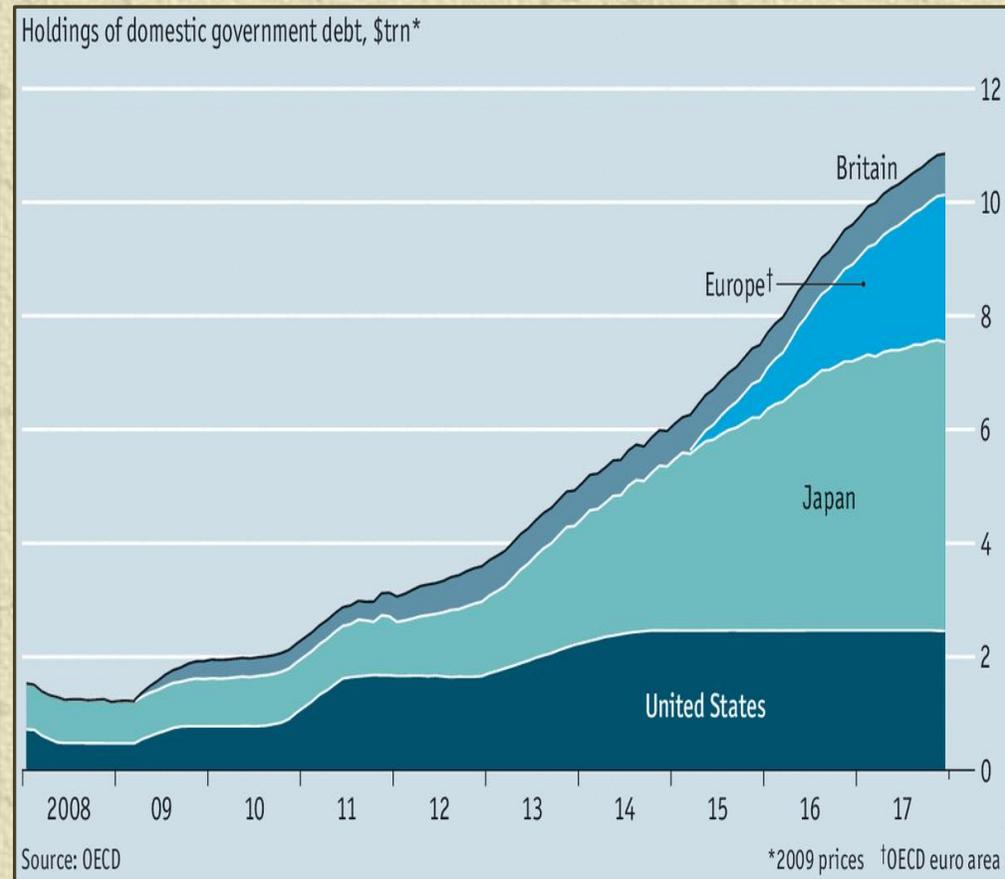


Fin Times, “Monetary policy: An unconventional tool”, 6 Oct 2014, p. 7

Taper tantrum: Fed announced scaling down of QE in 2011; ↓D for bonds by Fed → ↓P bonds (↑ yld); so investors acted first by selling

Domestic Macro Concerns, . . . continued

- ECB's QE and CBs' holding of domestic gov't debt



Domestic Macro Concerns, . . . continued

- ◆ QE: Implications for currency mkts
 - 2010: Brazil’s finance minister accuses US of currency war (↓\$)
 - ◆ ↑ \$ value until QE2
 - ◆ Brazilian real weakened



2016-19: ↑K-out of euro area (at fast pace). ECB bought €2.6 trn in debt. Investors selling bonds under QE program bought fc assets

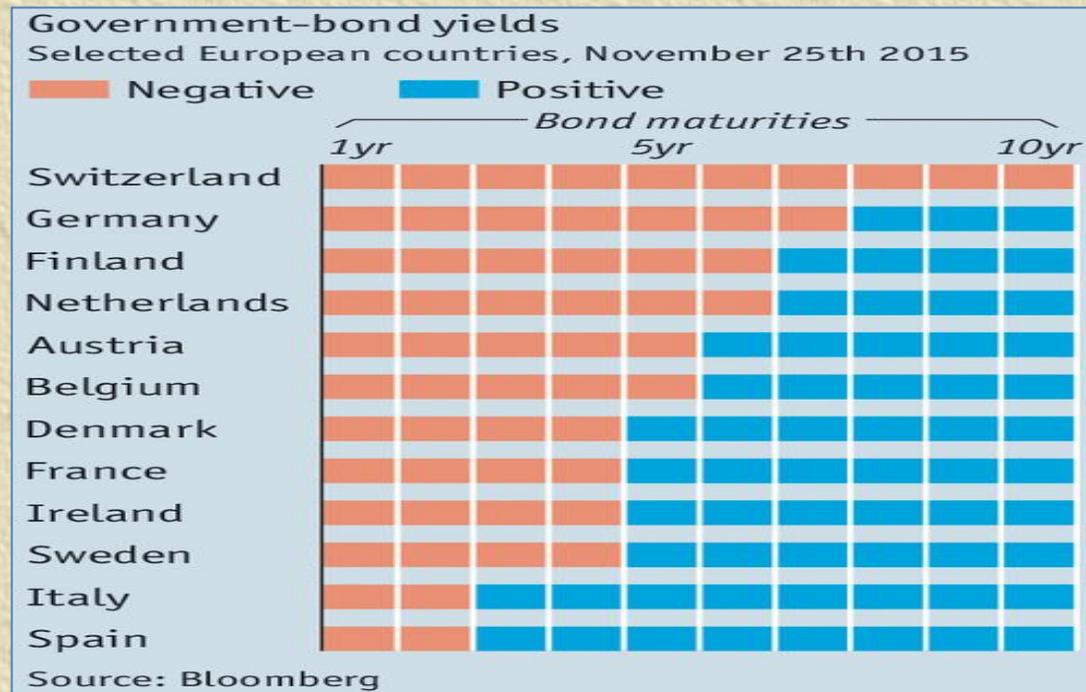
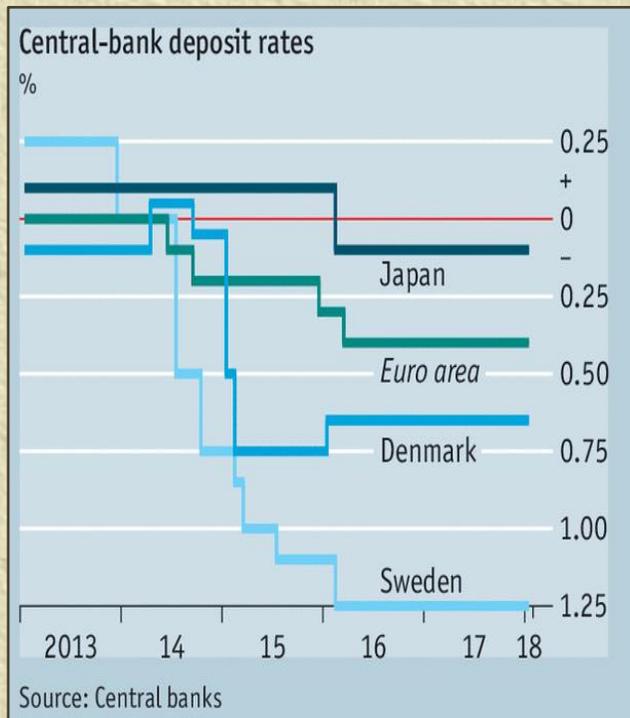
Economist, “Currencies: The weak shall inherit the earth”, 6 Oct 2012.

Financial Times, “Flood to trickle: QE round to bring reduced cash outflows from eurozone”, 30 Oct 2019, p. 11.

Domestic Macro Concerns, . . . continued

✦ Negative i-rates: Fisher (1930) and Gesell (1916)

- ◆ Rethink on i-rates: zero lower bound vs neg
- ◆ Biggest users of neg i-rate
 - Switz: prevent ↑ CHF value; Japan had low yields since 1990s
 - Germany: bond yields had been low before € crisis

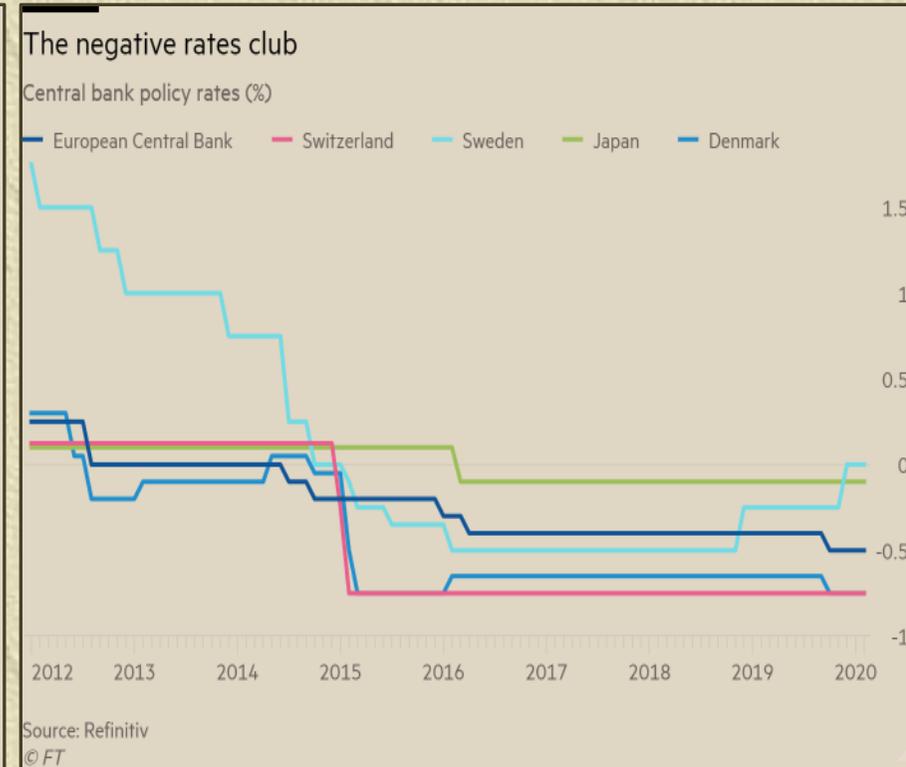
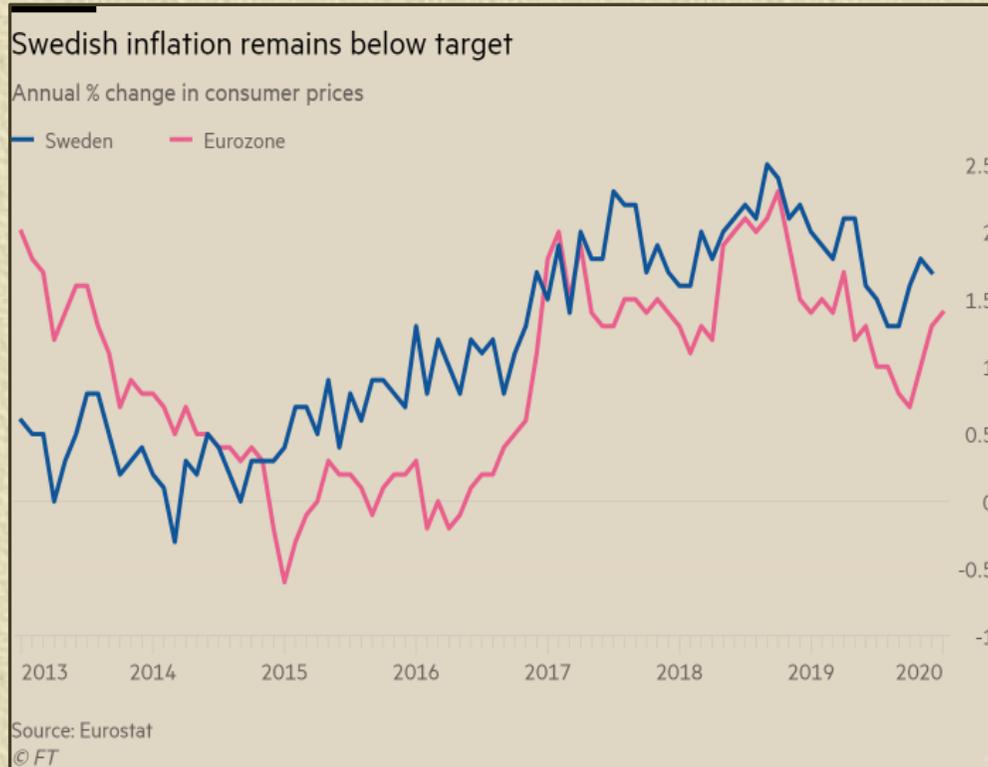


Economist, “Free exchange: Negative justice”, 3 Feb 2018, p. 63

Economist, “Negative interest rates: Bankers vs mattresses”, 28 Feb 2015, p. 63-4.

Domestic Macro Concerns, . . . continued

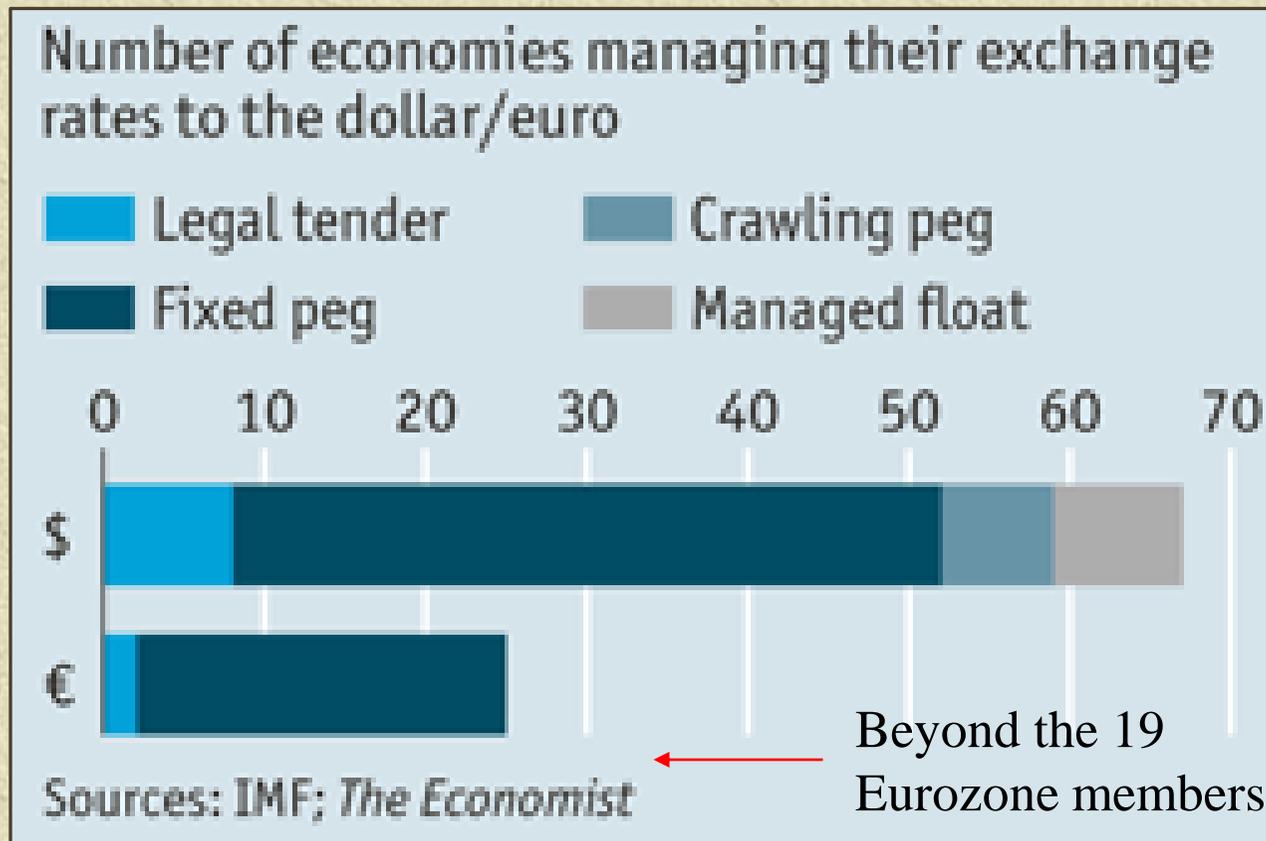
- ◆ Swedish experiment with neg i-rate ended Dec 2019



Riksbank decision, let $i=0$: Neg i-rates boosted real estate prices, HH and firms took on more debt; cheap loans keep zombie firms alive; lowered productivity;
Switzerland kept it to avoid increase in value of CHF

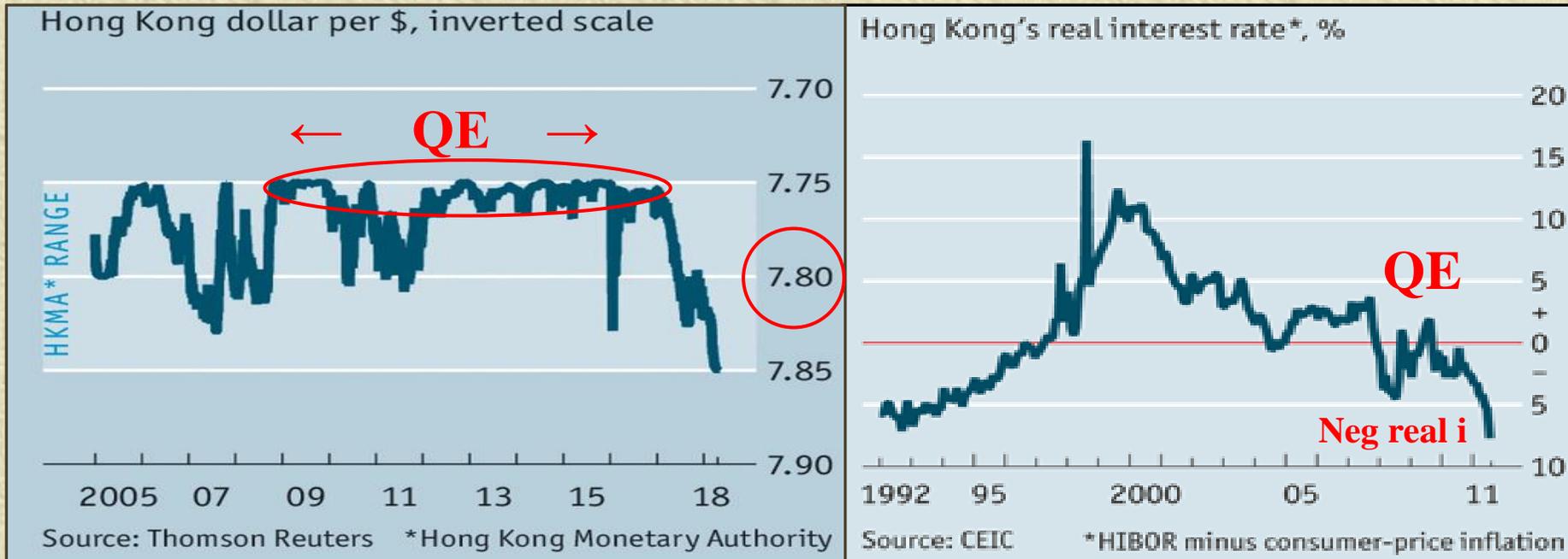
10. Alternative Exchange Regimes

✦ From flexible regimes to fixes



Alternative Exchange Regimes

✦ Hard fixes: currency board, dollarization, monetary union



1983: Hong Kong \$ pegged to \$US at 7.8.

2005: band-peg, buy \$US at HK\$7.75 and sell \$US at HK\$7.85.

2008: US QE \rightarrow \downarrow i-rates and promise to keep i low; HK's economy overheats, \downarrow u and property boom; under flexible E, HK\$ value and i_{HK} would \uparrow . Instead, \uparrow P and real i-rate went negative. E is fixed, but W, P are flexible up and down.

Economist, "Hong Kong dollar: Pershing missile", 24 Sep 2011, p. 92 and "Reserve peg", 21 Aug 2018, p. 65.

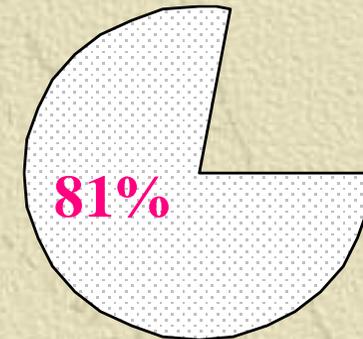
11. European Monetary Union

11.1 Case study of MU in eurozone

- ✦ Free trade in goods/services over integrated area
 - ◆ Single market initiative supports intra-regional trade
 - ◆ Intra-regional trade



Intra-regional trade as % of total, 2016

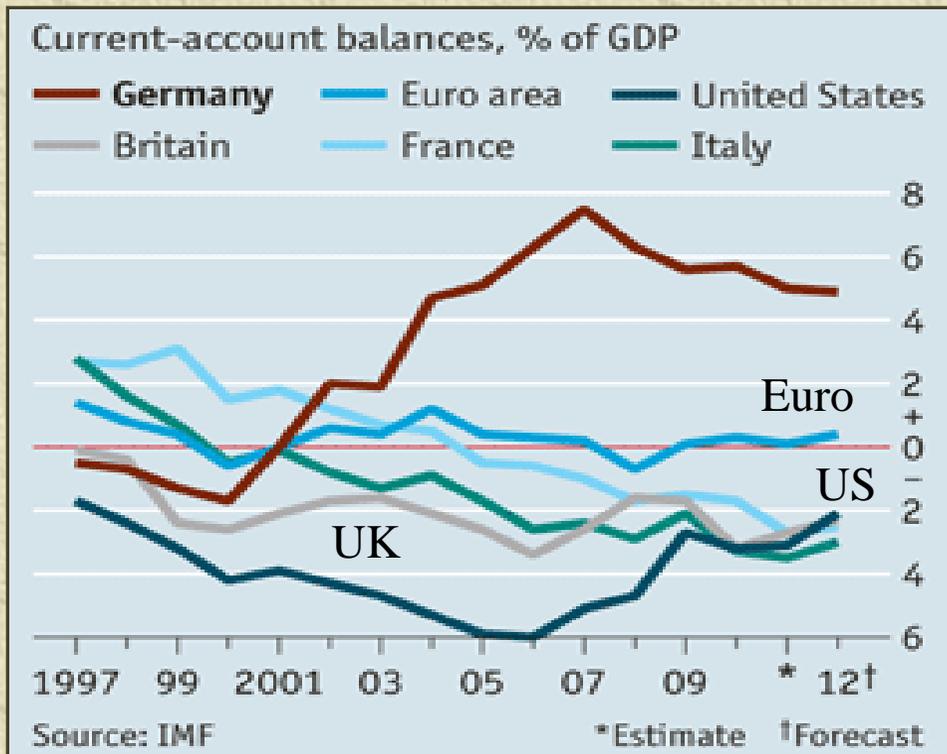


EU

Source: WTO

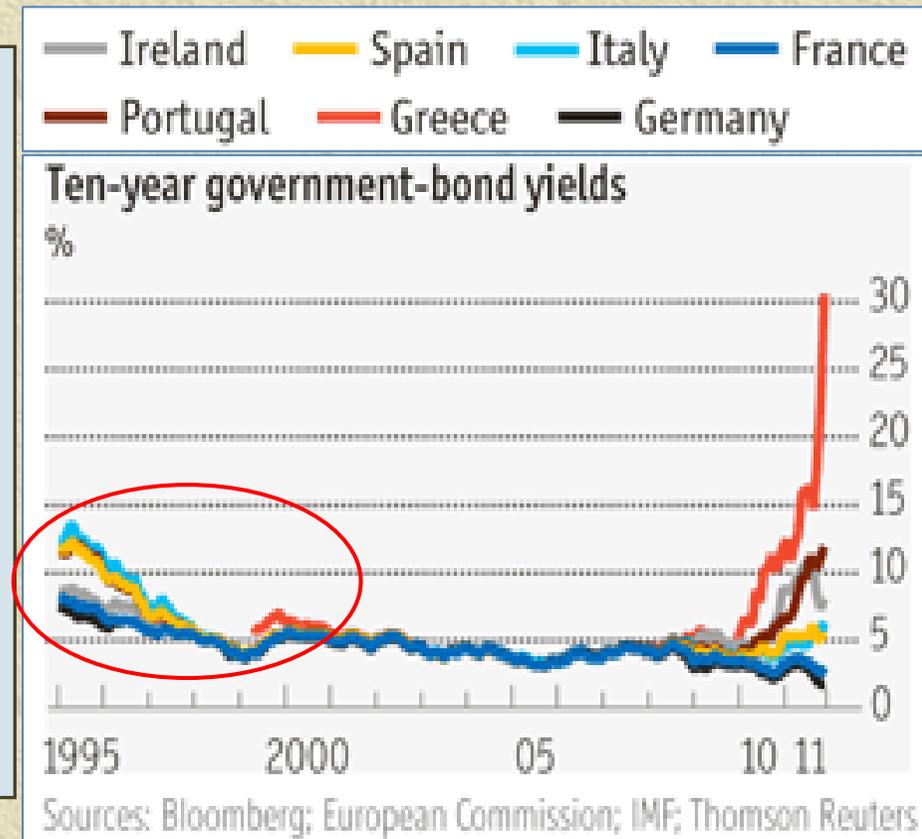
European Monetary Union, continued . . .

- ◆ Overall Eurozone BOT ≈ 0 masked underlying imbalances



The origins of the GFC and the euro crisis were macro imbalances and failure of the financial system's mgmt over supervision.

- ✦ Integration of K-mkts
- ◆ Convergence in i-rates



Economist, "The causes: a ... short history",
Special report on Europe and currency, 12
Nov 2011.

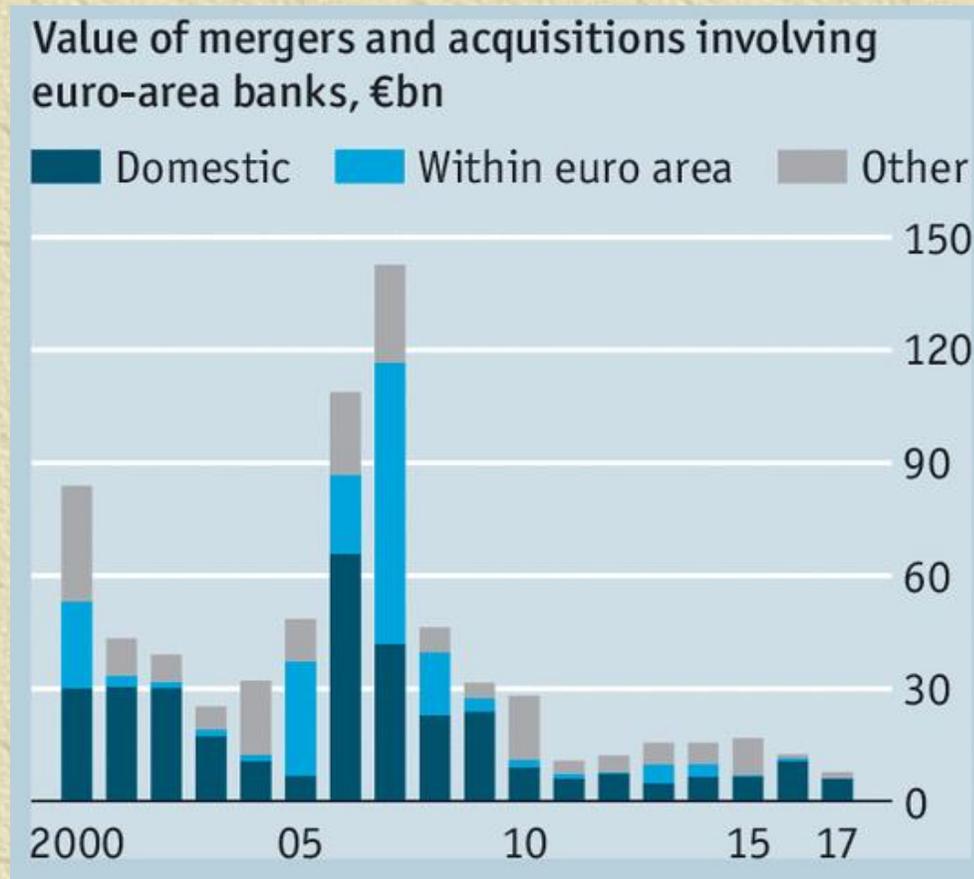
European Monetary Union, continued . . .

- ◆ Eurozone banking mkts still essentially national
 - Pan-zonal banks would ↓ risk of intertwined lenders and national gov'ts
 - ◆ 7/8 of lending is domestic
 - ◆ 3/5 of banks holdings of corporate and gov't bonds are from “home”



European Monetary Union, continued . . .

- Trend toward K-mkt integration thru M&A activity – before crisis



Regulators still not keen on the idea (incomplete banking union).

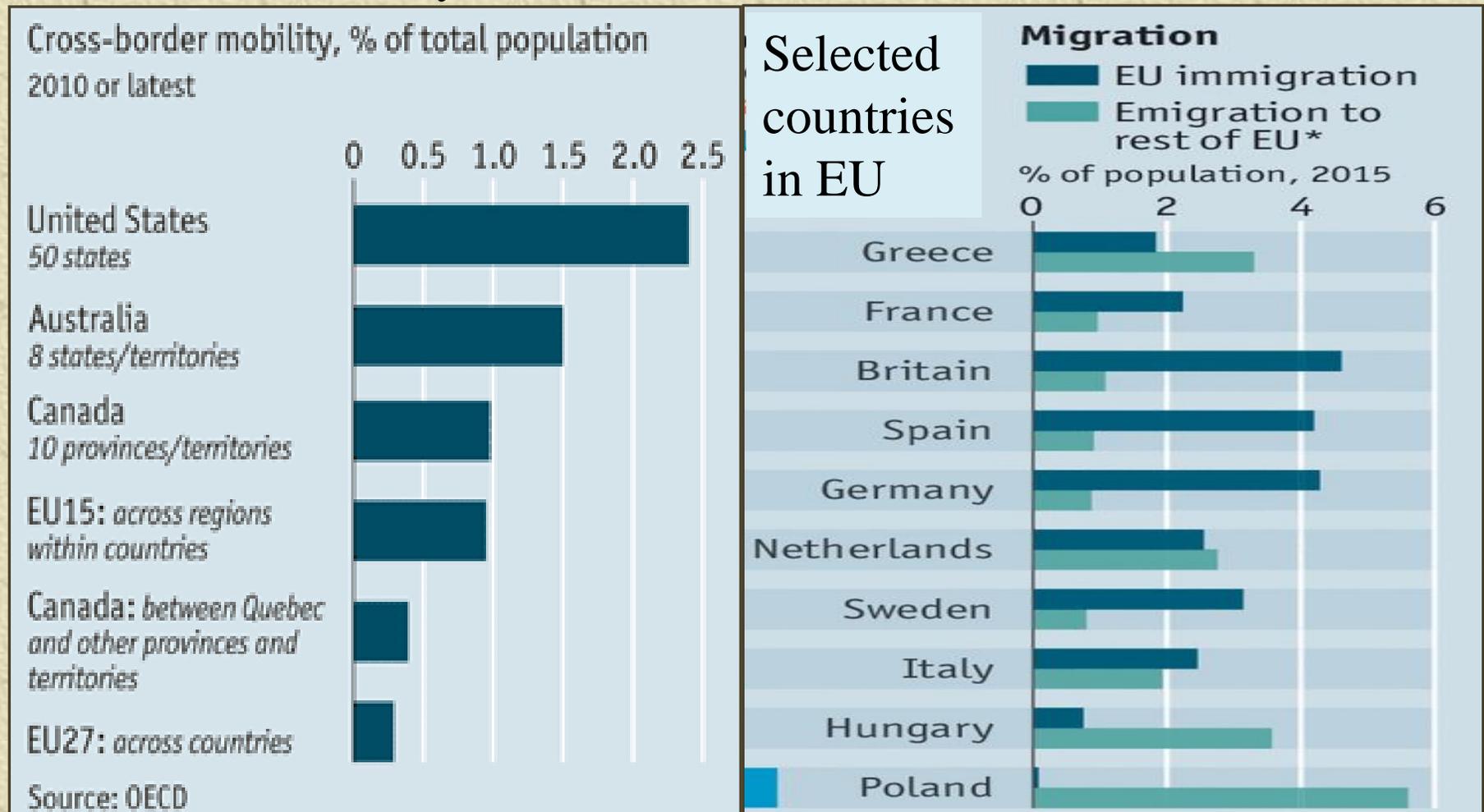
- Big banks that operate across eurozone complain that **local regulators prevent a bank from putting deposits raised in Germany to use in K-scarce areas** of the eurozone.
- The ECB as a single regulator has not changed much: more leniency on the liquidity side but none on capital side
- Concern is scale is offset by complexity of cross-border banking – need banking union.

Economist, “European bank mergers: Passport check”, 28 Mar 2015, p. 70-1; and “European banks: Fumbling in the dark”, 14 Jul 2018, p.63.

European Monetary Union, continued . . .

✦ Integrated EU labor markets

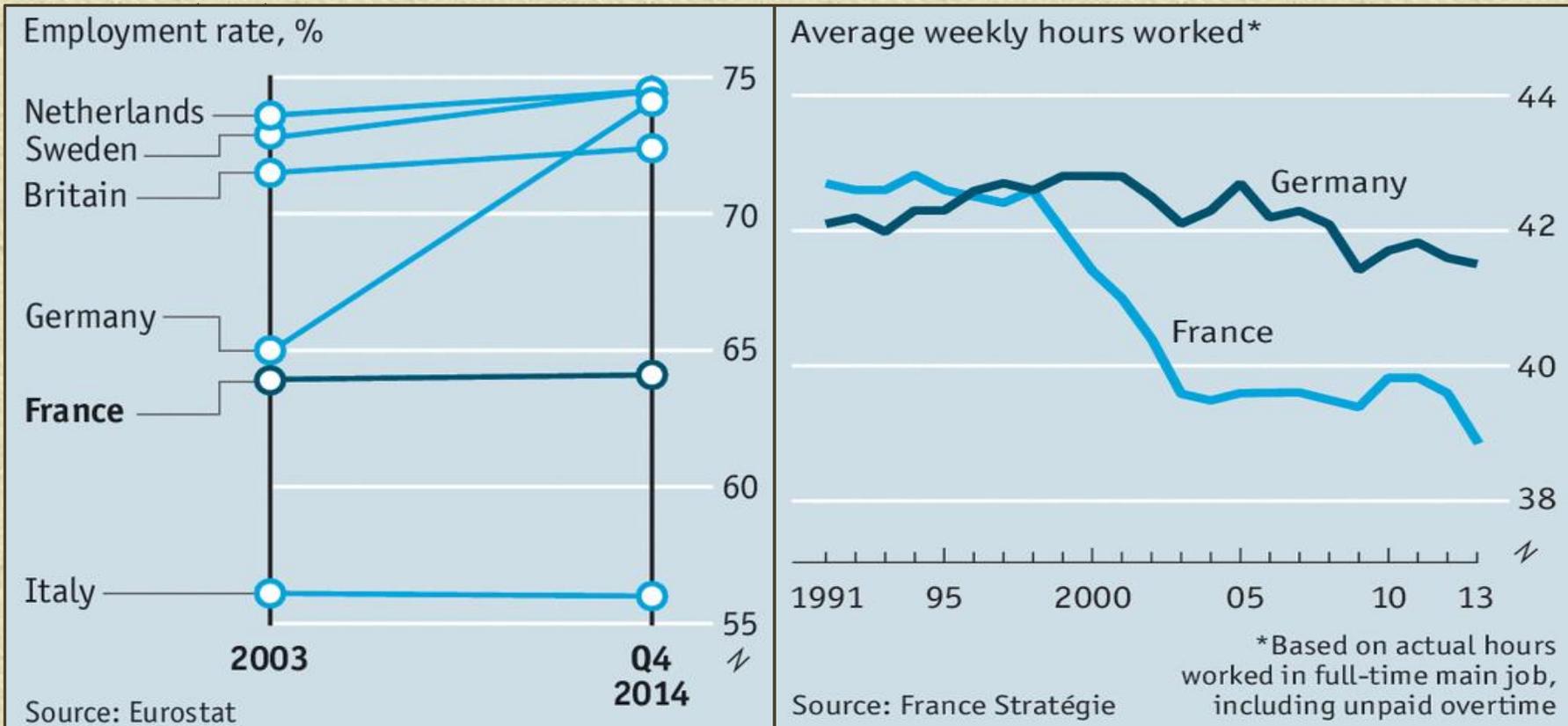
◆ Labor mobility



Economist, “Building euro-zone competitiveness”, 28 Apr 2012 and “Brexit: An aggravating absence”, 2 Jul 2016, p. 19-20.

European Monetary Union, continued . . .

◆ Employment patterns after EU L mkt reforms; average hours



In 2003, France and Germany had similar employment rates and both broke euro stability-pact rule not to exceed 3% budget deficit ceiling agreed in 1997. Germany used its fiscal space to become more competitive and loosen its labor mkt. France introduced a 35-hour work week.

European Monetary Union, continued . . .

- ◆ Wage flexibility: unit L costs, internal devaluation and competition



German unit L costs fell in 2000. This helped Germany's competitiveness (at a cost to domestic demand).

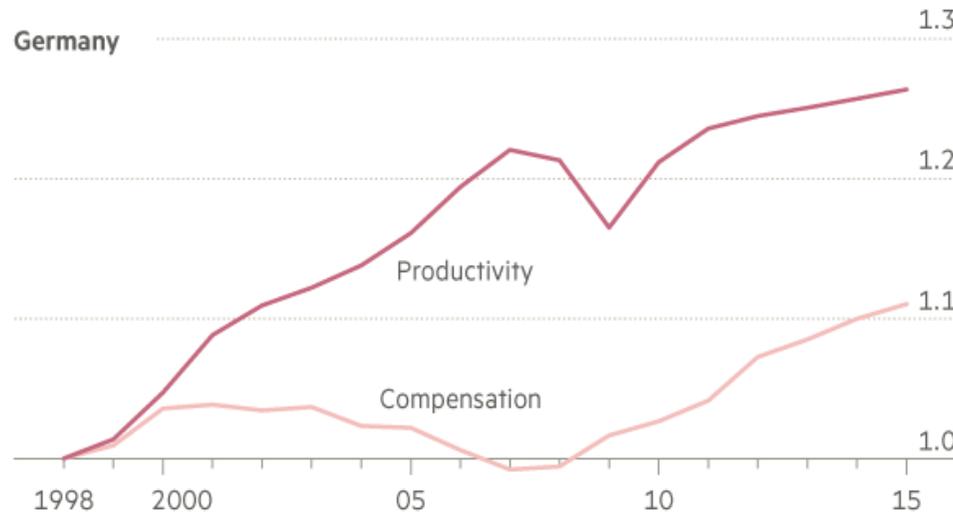
In the wake of the 2008 crisis, workers struck deals that prevented job cuts in return for moderate wage increases or pay cuts.

European Monetary Union, continued . . .

◆ Productivity and wages

Productivity v wage growth: Germany

Productivity = GVA per hour worked deflated by national GVA deflator.
Compensation = hourly compensation of employees deflated by the eurozone GVA deflator

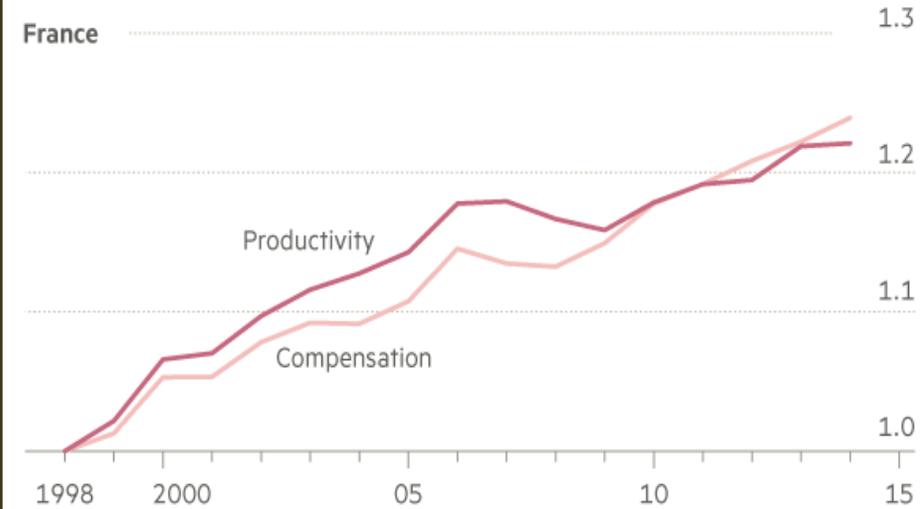


Source: Berger and Wolff 'The global decline in the labour income share: is capital the answer to Germany's current account surplus?' Bruegel, 2017

FT

Productivity v wage growth: France

Productivity = GVA per hour worked deflated by national GVA deflator.
Compensation = hourly compensation of employees deflated by the eurozone GVA deflator



Source: Berger and Wolff 'The global decline in the labour income share: is capital the answer to Germany's current account surplus?' Bruegel, 2017

FT

Financial Times, "Macron and the battle for the eurozone", M. Wolf, 17 May 2017, p. 9.

European Monetary Union, continued . . .

- ◆ Tax wedge (% of labor costs) and unemployment rates differ



France's high tax wedge on employment reflects its costs of unemployment-insurance, social charges and costs-related to job protection, i.e., it is a measure of labor inflexibility. Different unemployment rates suggest immobility.

European Monetary Union, continued . . .

◆ Employment protection indicator



OECD job protection index shows southern European countries did most in response to the euro crisis to liberalize firing of workers. Flexibility matters. Despite Germany's high job protection score, its labour market functions because its collective bargaining has been adaptable – firms can strike deals with labor.

Economist, "Labour reforms in Europe: Slowly doing better", 25 Apr 2015, p. 24-5

European Monetary Union, continued . . .

✦ Fiscal stabilization in euroarea

◆ Not envisioned

- Small EU budget
- No bailouts
- $G > T$: 3% GDP
- Debt level: 60% of GDP

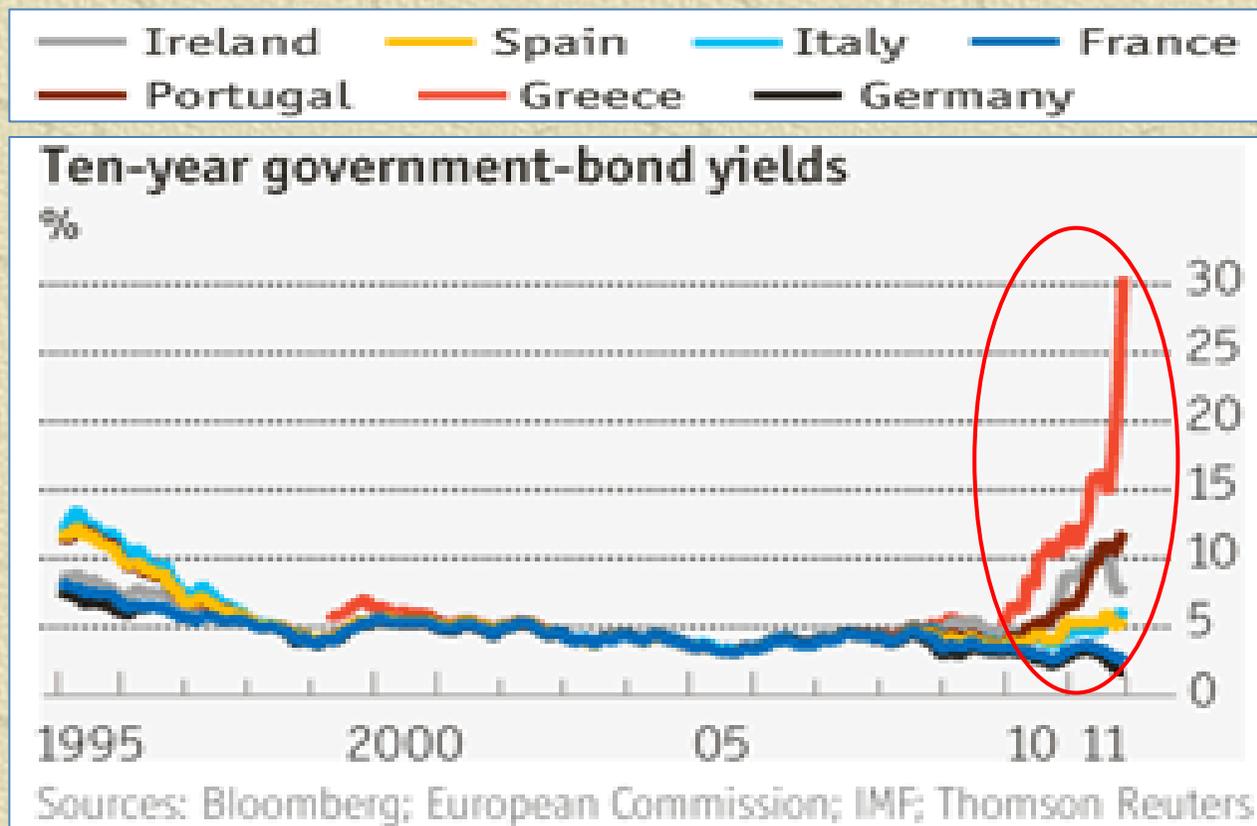
Federal transfers in US



European Monetary Union, continued . . .

11.2 The euro crisis

- ✦ Pre-crisis: Maastricht Treaty shortcomings
- ✦ Initial response wrong or slow
- ✦ Signs of a financial crisis



European Monetary Union, continued . . .

- ◆ Exposure of foreign banks to debt from PIIGS



The exposure to the debt shows how integrated K-mkts became interlinked in banking and finance. Solving the euro crisis became a necessity within and without the Eurozone.

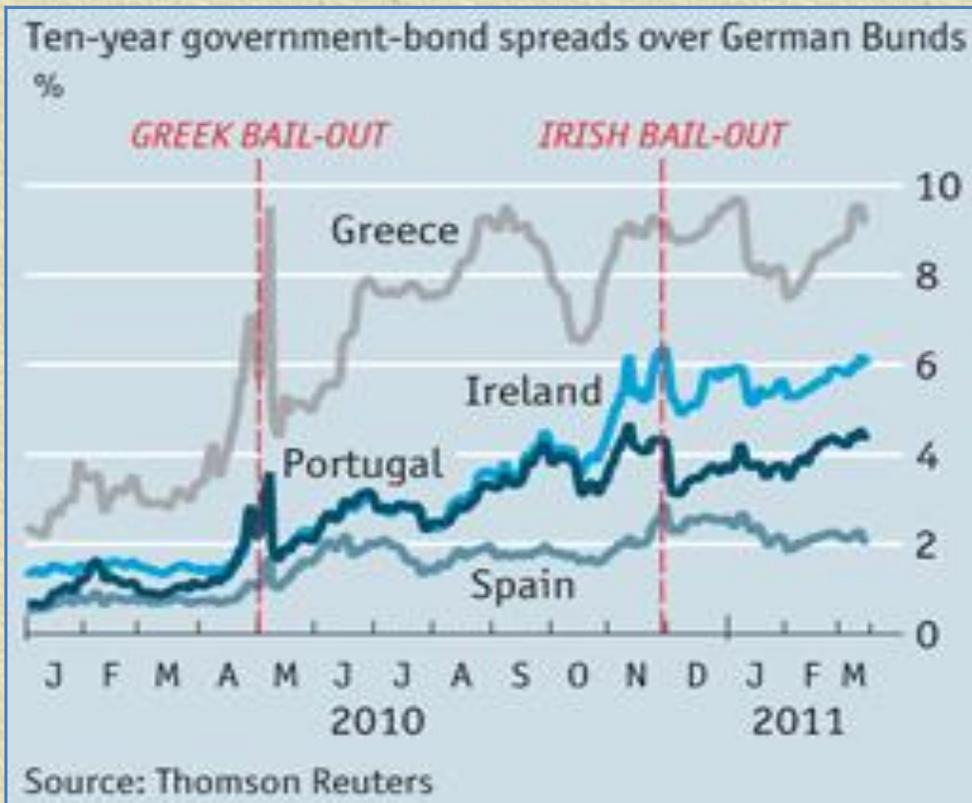
European Monetary Union, continued . . .

- ✦ Convergence – divergence: video, St. Louis Fed, 4:08 minute mark to 9:05 mark
- ✦ <https://www.stlouisfed.org/annual-report/2011>

European Monetary Union, continued . . .

11.3 Chronology of EU's response to euro crisis

- ✦ ECB only existing institution able to react
 - ◆ 2007: ECB's light version of credit easing
 - ◆ 2010: ECB Securities market program – light QE



European Monetary Union, continued . . .

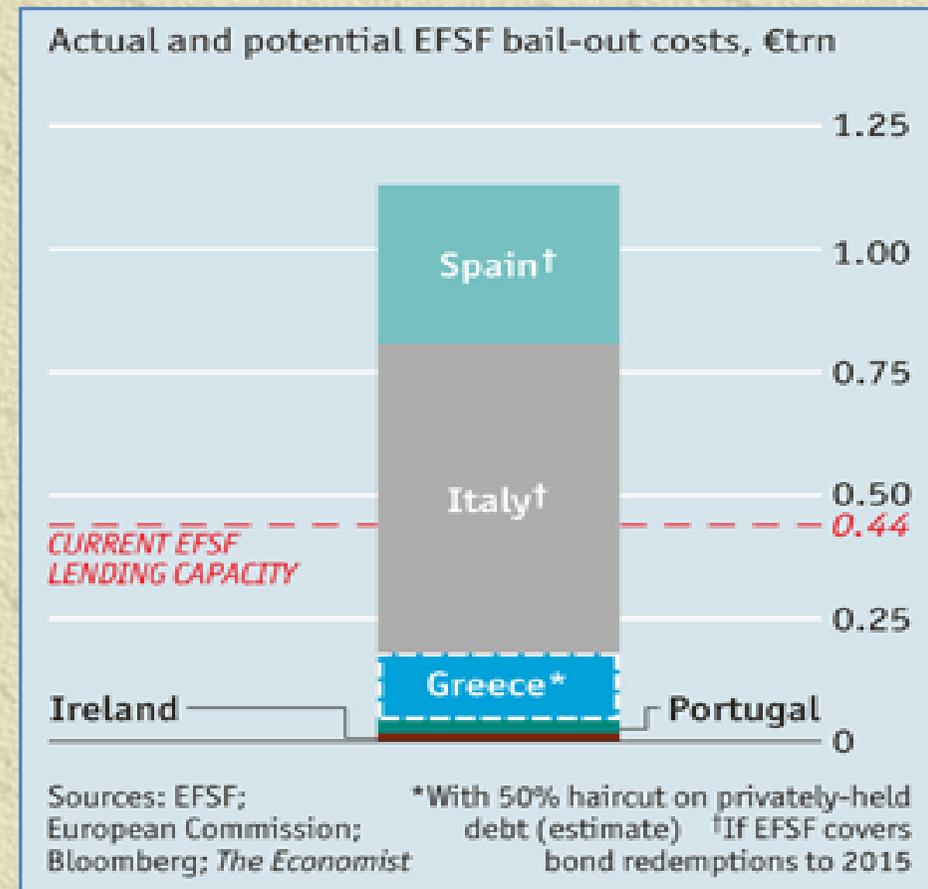
✦ Non-ECB financial stabilization mechanisms – moves asset purchases away from ECB

✦ 2010: European Financial Stabilization Facility (EFSF)

- Issuing debt to raise funds
- EFSF funds rose to €750bn from EC funds and EU guarantees and the IMF

✦ 2012: European Stability Mechanism (ESM)

- Permanent mechanism
- ↑ lending capacity of €500bn + €700bn in guarantees

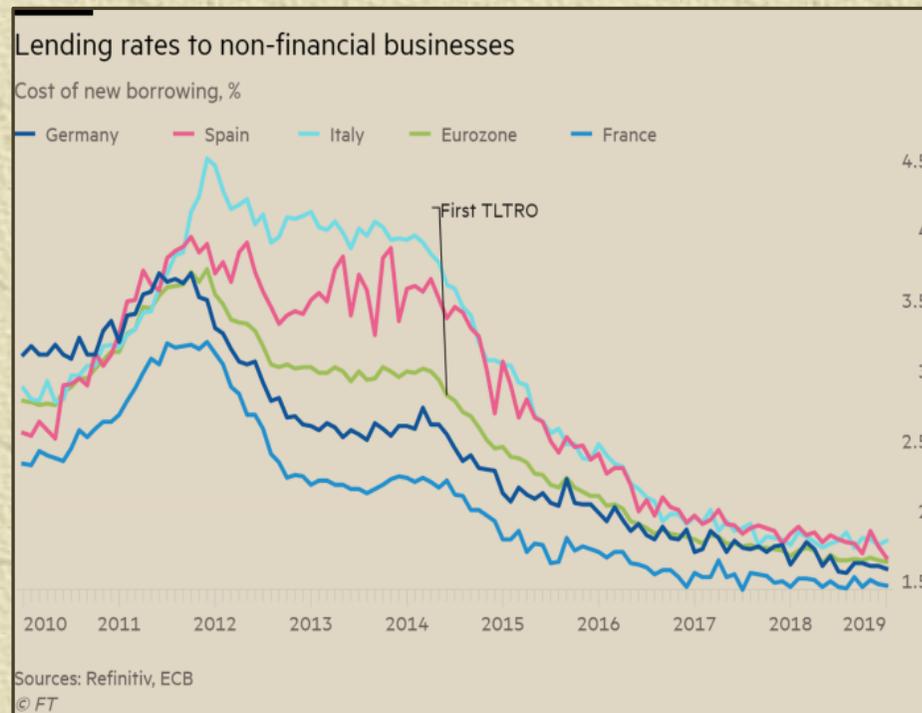


European Monetary Union, continued . . .

✦ ECB signals low long-term i-rates

◆ Long-term refinancing operations (LTRO) by ECB

- 2011-12: LTRO - cash injections to banks
- 2014: Targeted LTRO to expand the program
- 2016: Second round of TLTRO

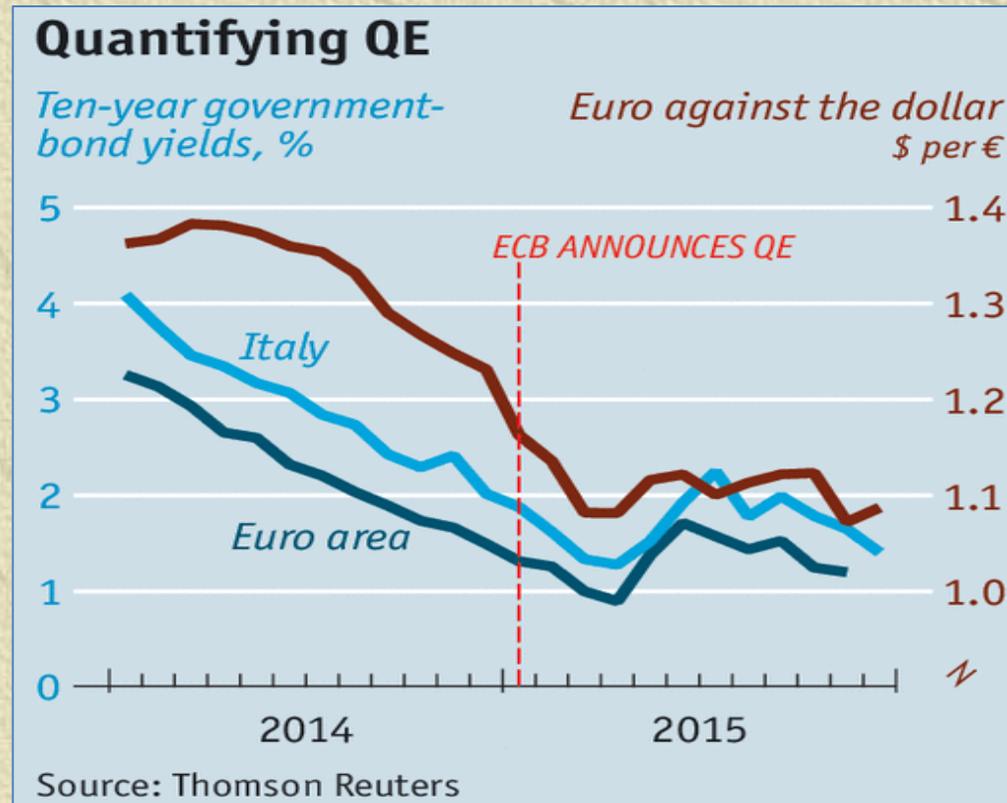


The differences in lending rates ↓ as higher rates in troubled countries ↓ as intended, but the appetite for debt across euro area faded. LTRO did not → ↑ steady lending despite rock bottom rates.

European Monetary Union, continued . . .

✦ QE proper by ECB- 5 years after US, UK

- ◆ 2014: Pursues QE aggressively despite critics
- ◆ 2015: Purchases ↑ to €60bn/mo from €10bn/mo
- ◆ 2018: ‘Tapering’ of purchases ↓ €80bn to €60bn no end date



European Monetary Union, continued . . .

11.4 Longer-term institutional mechanisms

✦ Mutualize debt: create a eurobond

- ◆ ESM necessary but not sufficient
- ◆ EC's proposal: blue and red bonds failed
- ◆ 2021-26 Next-Gen EU: €750bn stimulus – mutually back debt (post-pandemic recovery)

✦ Fiscal union: stabilization, coordination & governance

- ◆ New rules on $(G-T) > 0$ (3% of GDP), debt ($< 60\%$ of GDP)
- ◆ Supra-nat'al surveillance on fiscal budgets

✦ Banking union: 3 pillars

- ◆ ECB: single supervisor and single resolution authority
- ◆ No joint deposit-insurance (tabled is €100 000 insurance)

Fully-fledged banking union

- Three pillars

Single supervisory Mechanism (SSM)

- * Homogenous supervisory stds across euroarea
- * ECB directly supervises 128 biggest banks, 85% of total euro-area bank assets
- * Comprehensive assessment of banks (stress tests)

Single Resolution Mechanism (SRM)

- * Single authority responsible for resolution of euro area banks
- * Resolution financed by shareholders and creditors (bail-in = 8% of total liability (pre-defined liability)
- * Bank levies (at nat'l level) to raise funds

Single Deposit Guarantee Scheme

- * No single deposit scheme created
- * Harmonized deposit guarantee scheme as set out in Single Rule Book
- * Deposit guaranteed up to €100,000 everywhere in EU
- * Funds from deposits collected from banks over 10-yr period

Based on EU-wide rules for banks, the Single Rule Book, e.g., Dir. On Capital Requirements (Basel III) since 2014, Bank Recovery and Resolution and Deposit Guarantee Scheme (DGS) starting in 2015.

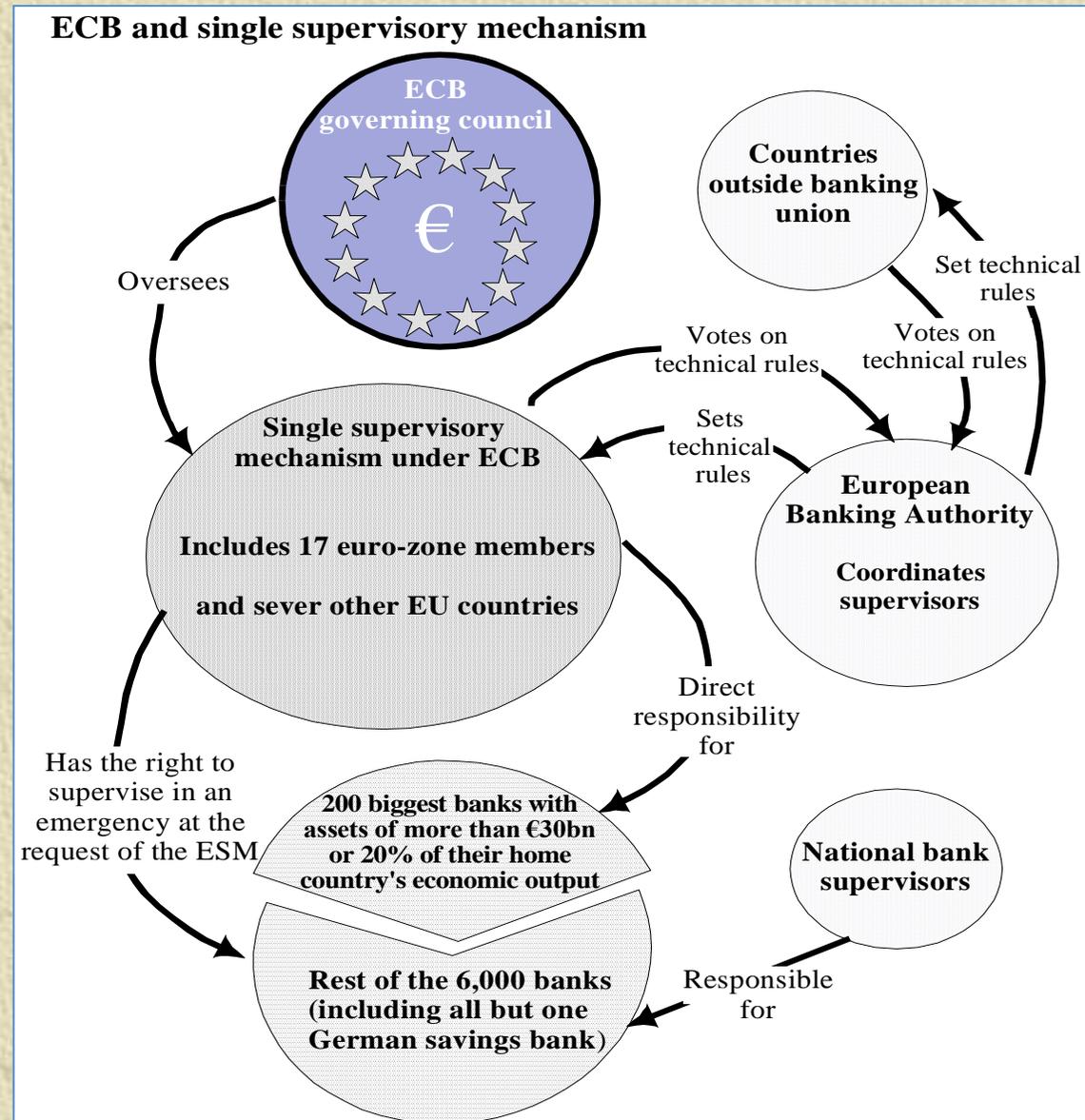
Source: Allianz GI Global Capital Markets and Thematic Research, May 2014



Banks no longer "European in life, but national in death". Bail-in should become the rule, bail-outs the exception.

European Monetary Union, continued . . .

- ECB's supervisory role



European Monetary Union, continued . . .

- ◆ Video clip, *Financial Times*, “How the euro was saved”

<http://video.ft.com/3567899112001/How-the-euro-was-saved/World>

European Monetary Union, continued . . .

11.5 Euro area institutional and policy response now

- ✦ ECB and banking relatively same
 - ✦ Fiscal union: long-run fiscal position
 - ◆ Fiscal rules in place – those that apply to all
 - ◆ Country-specific rules – when fiscal rules violated “excessive deficit procedure (EDP)” can be enacted
 - Tailored structured budget balance
 - Limit a country’s real spending growth at/below potential output
- Despite violations EDP has not been enforced (Italy in 2019 came close)
- ◆ EU-wide spending rule could make possible anchor for FP
 - ◆ Tying nominal spending growth to output makes rule less procyclical
 - ◆ No common euroarea budget highlights difficulty

Pandemic suspensions:
FP, state aid, transfers
(Nextgen EU)

European Monetary Union, continued . . .

✦ Intra-euro area convergence or divergence?

