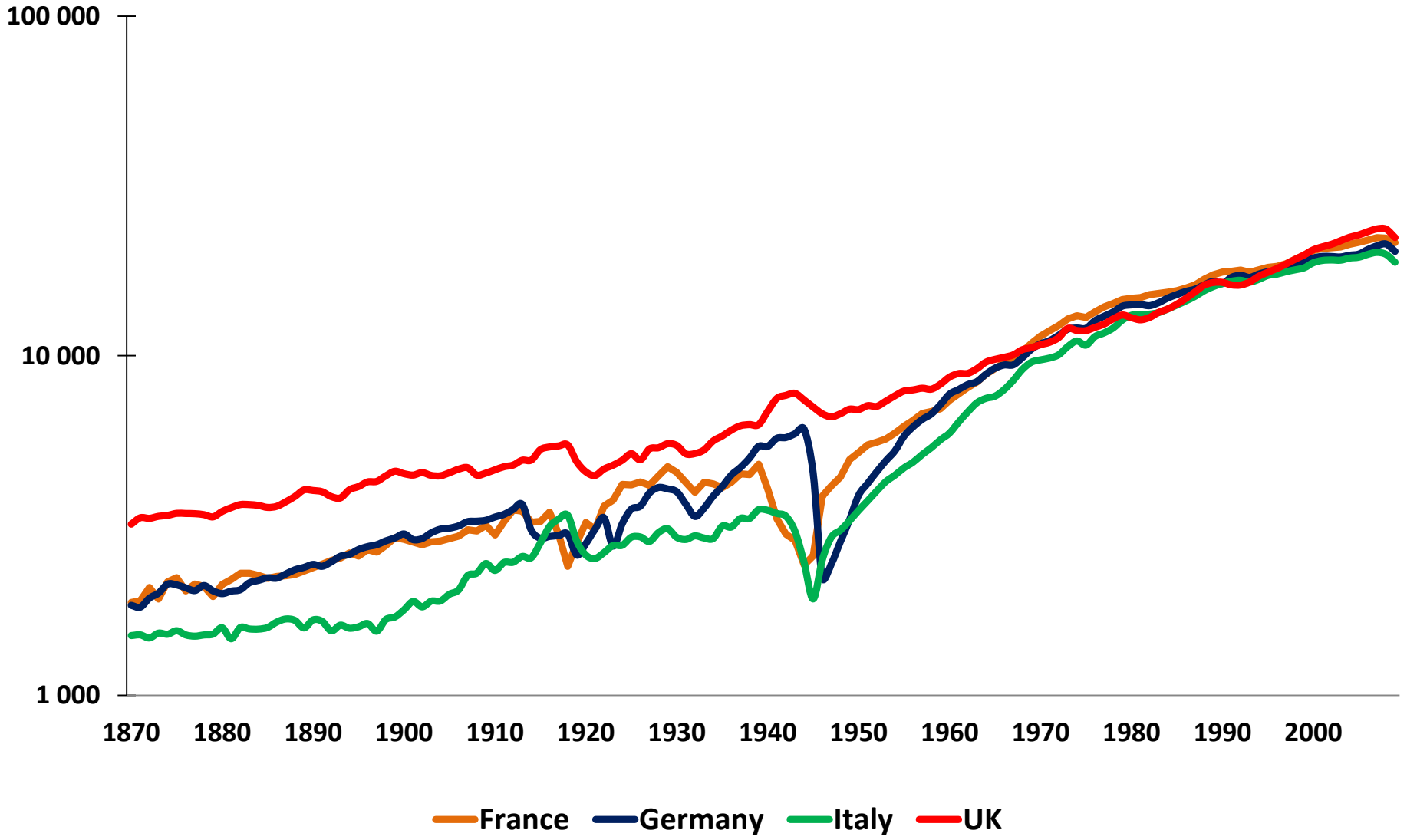
Lecture I

Macroeconomic data and policies

… and what is this course about?

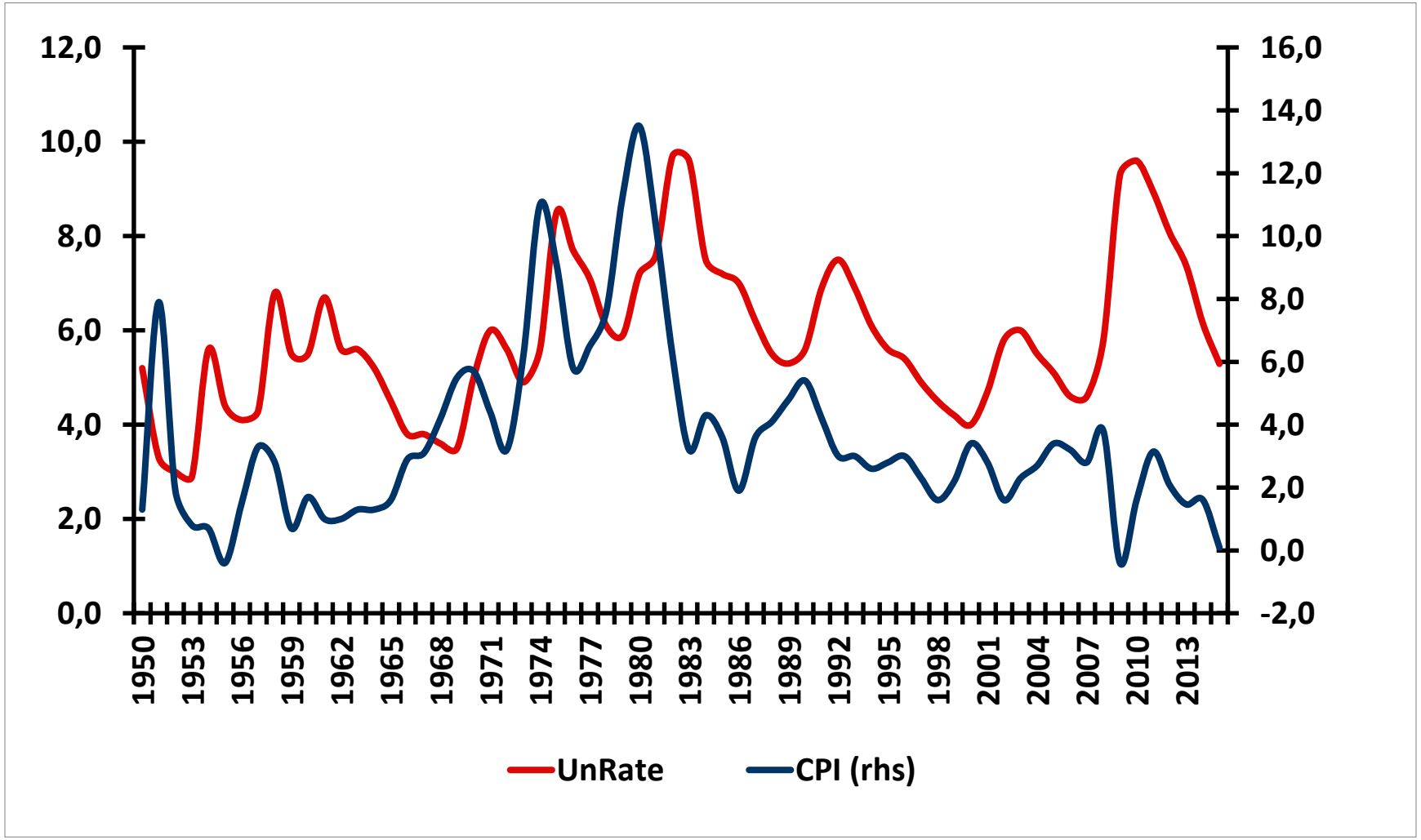
Real GDP p.c., 1870 – 2009: F, D, I, UK

1990 International Geary – Khamis dollars, log scale



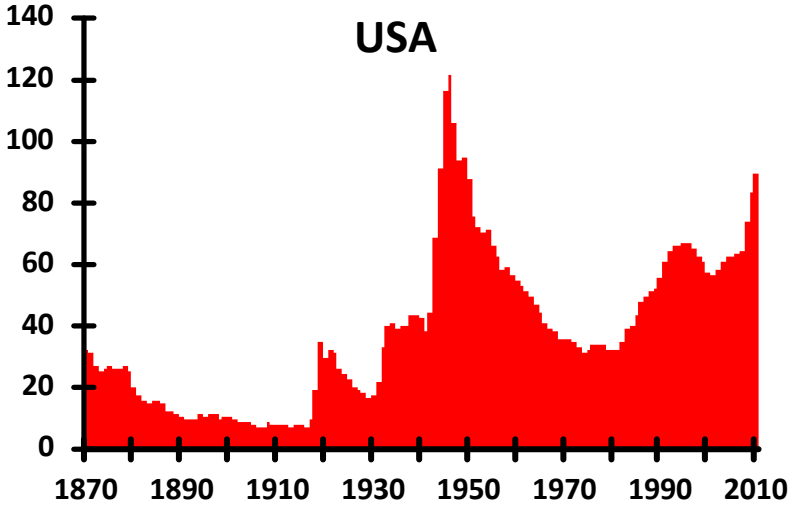
Inflation vs. unemployment, %

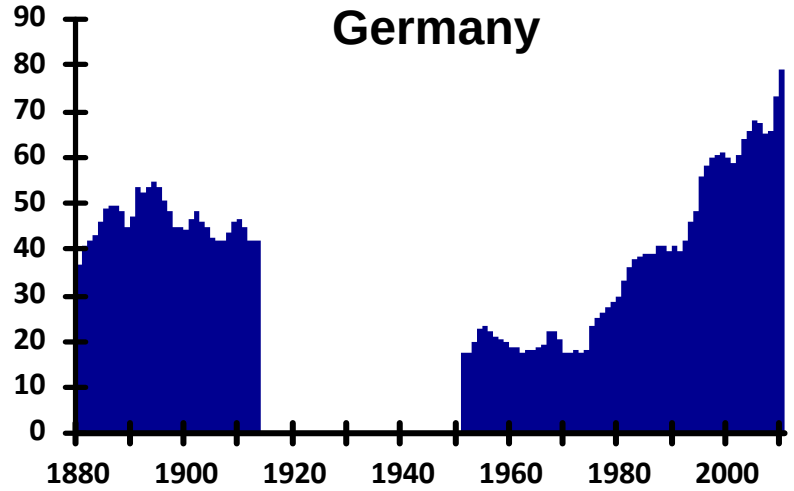
US, long-term

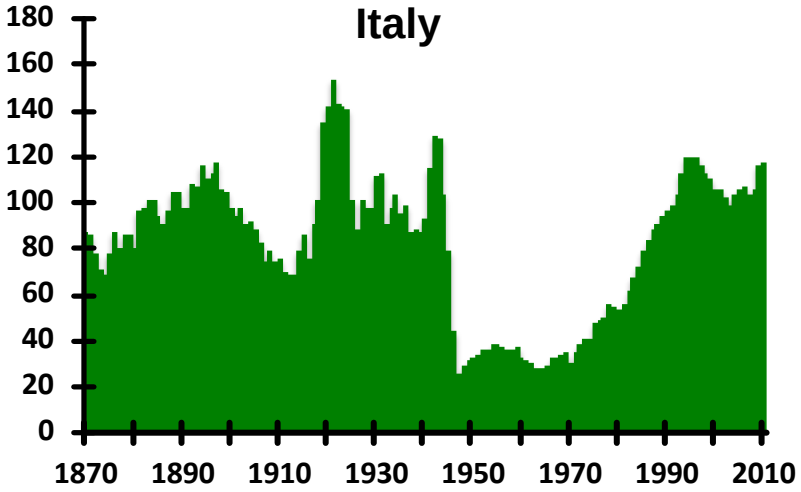


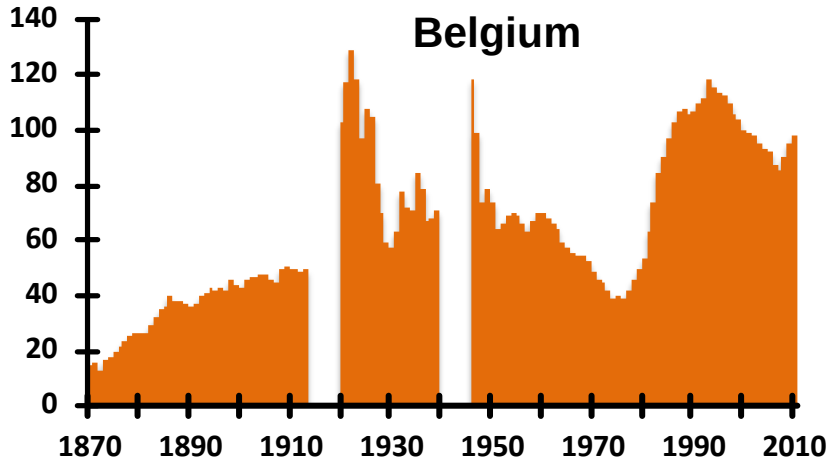
Gross debt, %GDP

Int





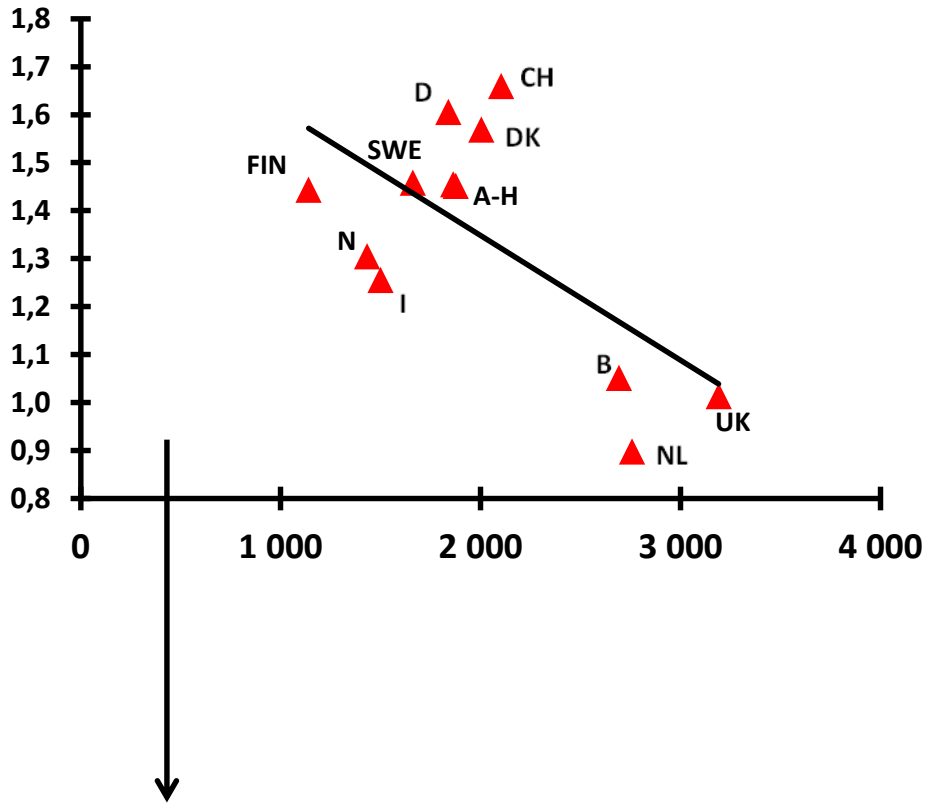


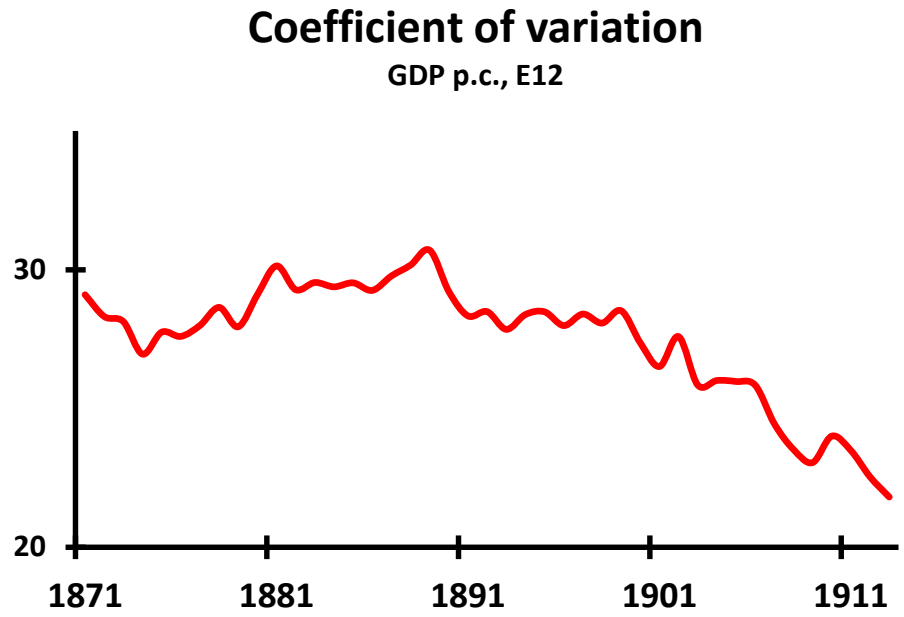


Source: This time is different (www.rheinhartandrogoff.com/data

Lecture II
Globalization 1870 – 1913, gold standard

Convergence

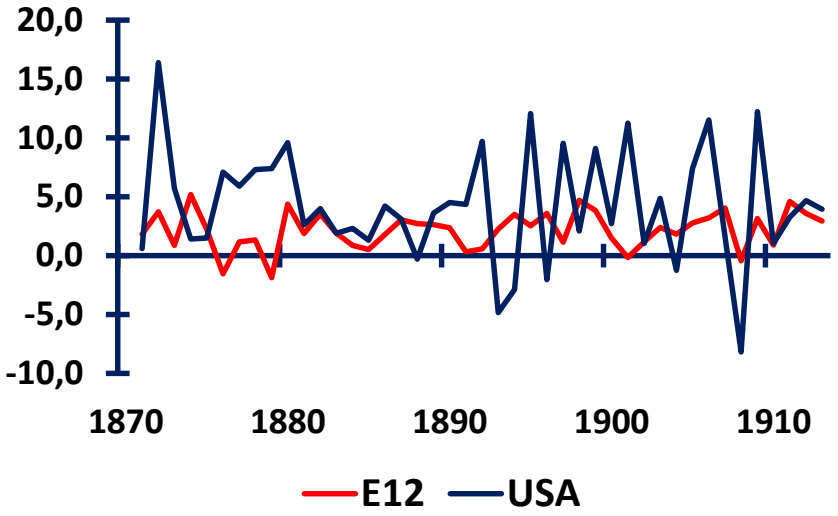


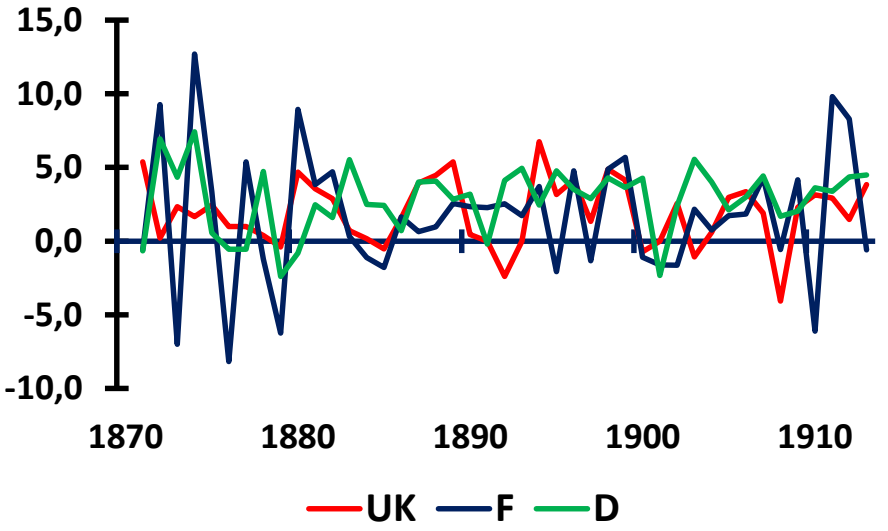


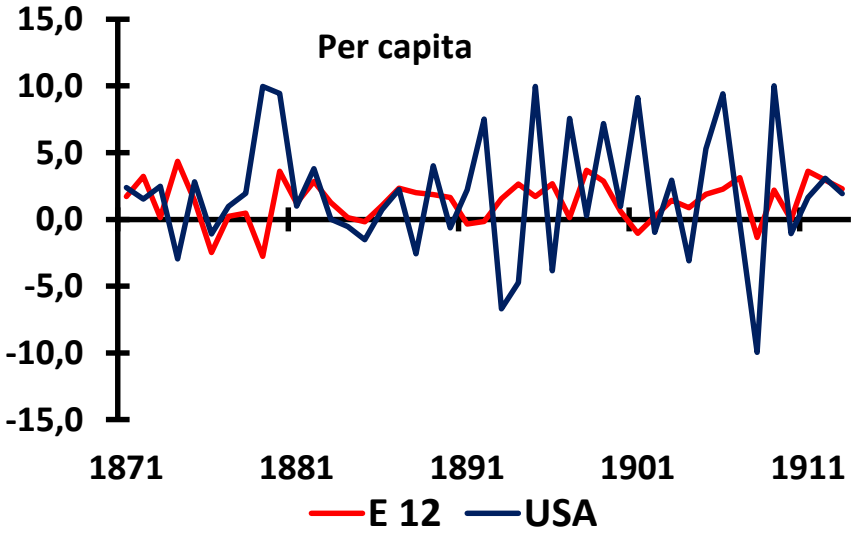
On horizontal axis: GDP p.c. in 1870
On vertical axis: average GDP p.c. growth 1871-1913
Correlation coefficient: -0,63

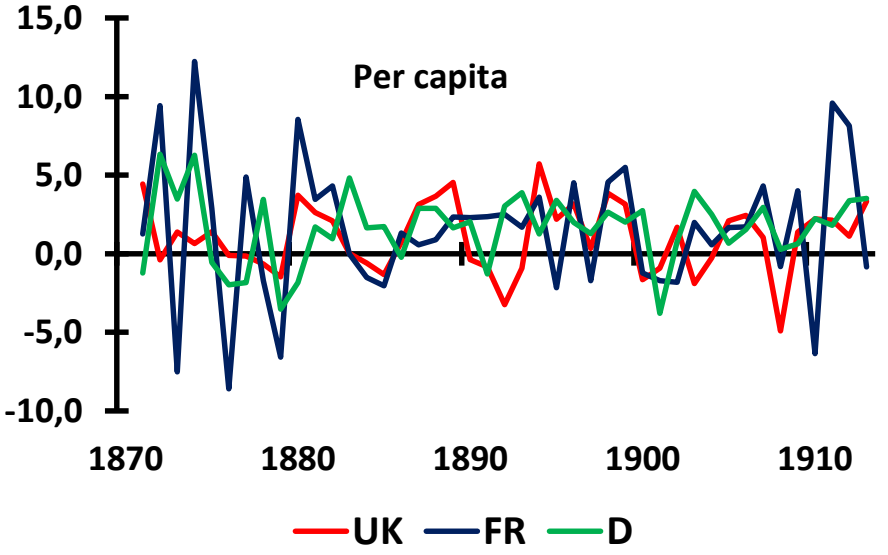
GDP, % yoy

1990 International G-K USD





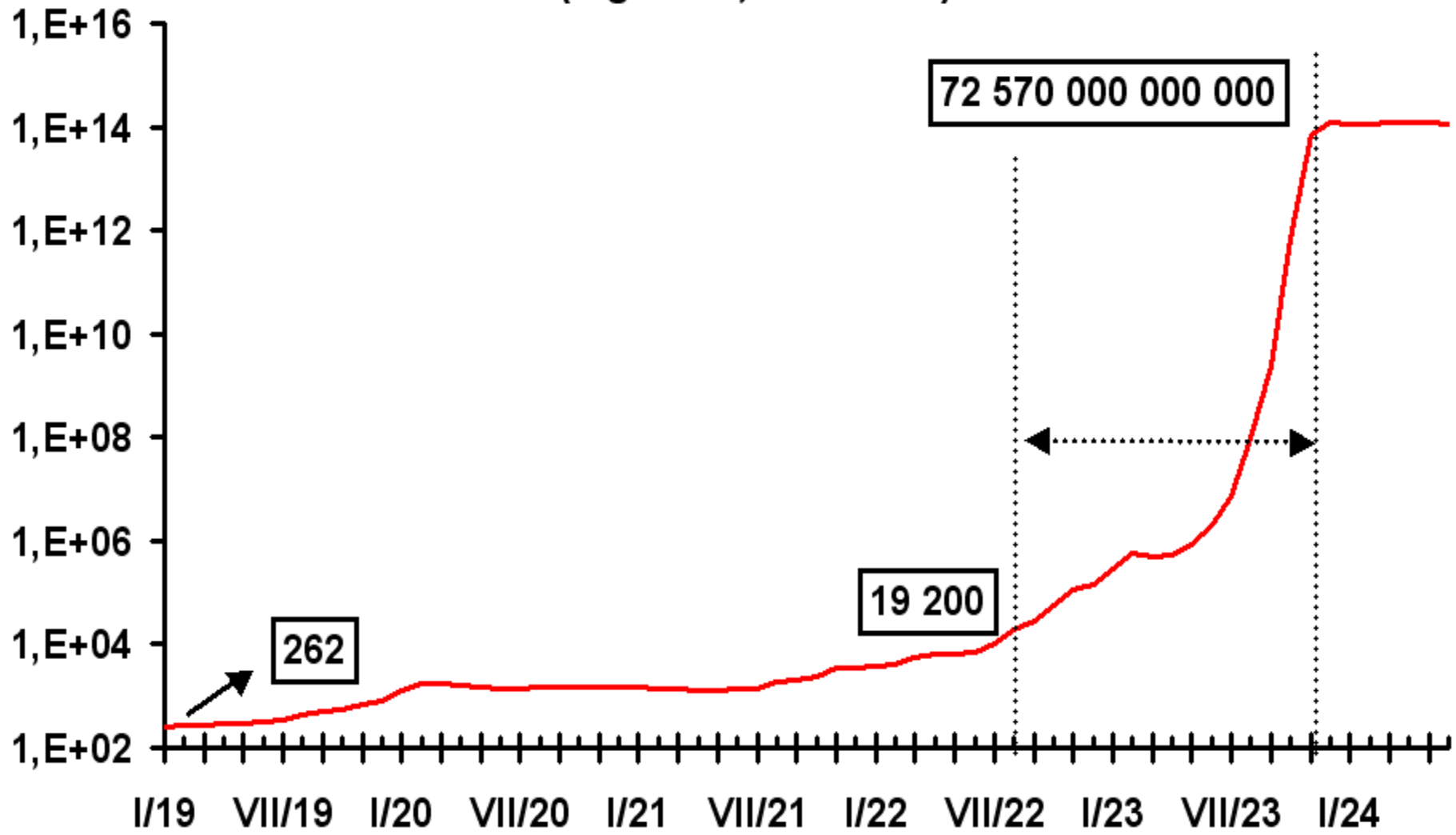




III. After WWI – Hyperinflations and the Return of Gold Standard

Hyperinflation - Germany: Retail Prices

(log scale, VI/14=100)

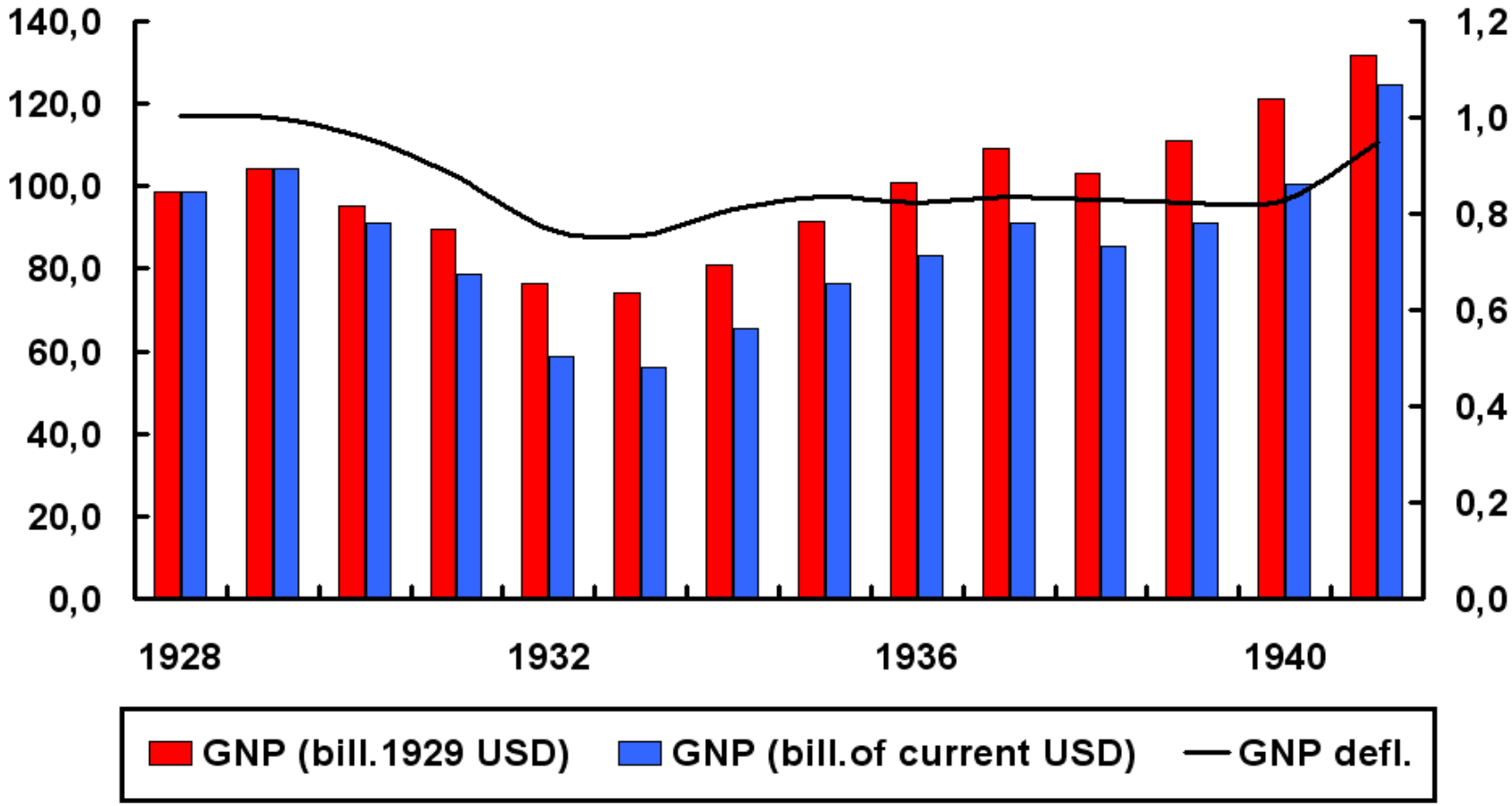


Lessons

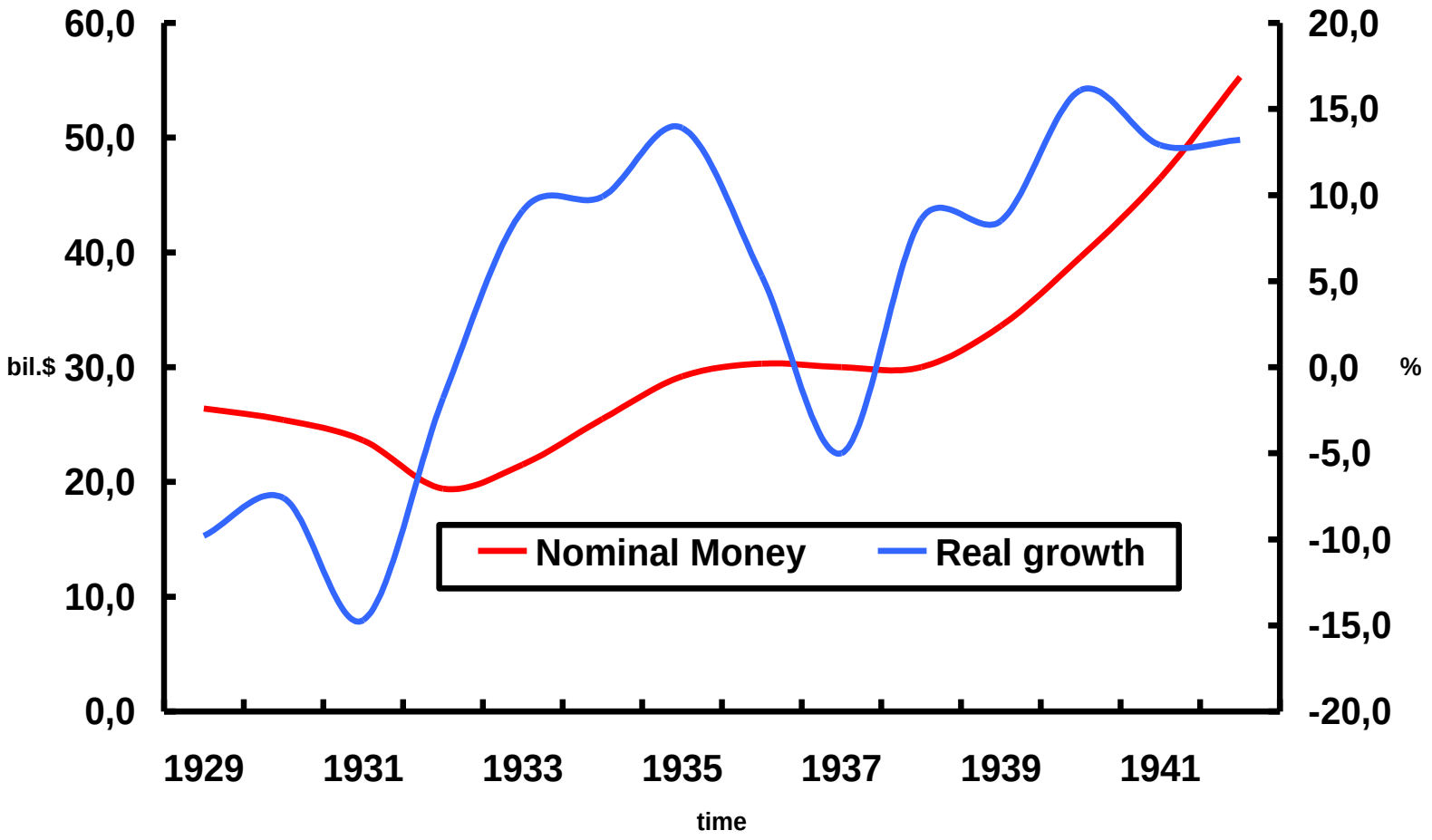
- **Essential stabilization steps: simultaneous (a) creation of independent central bank, that stopped unsecured lending to the state, (b) change of fiscal policies, (c) change in inflationary expectations, (d) stabilization and defense of ExR**
- **Government could borrow only with private sector and debt was ultimately backed by its ability to collect taxes efficiently**
- **The main source of hyperinflation: growth of currency that was backed by government bills, unsecured by future state incomes**
- **This created expectations that further fueled the inflation spiral, unless being broken by newly, generally trusted central bank's policy**
- **Earlier attempts to stabilize that failed (e.g. Germany): unless accompanied by fiscal reform, doomed to fail**

IV. The Great Depression

GNP, USA, 1928-1941



US: real growth and money



V Keynesian revolution

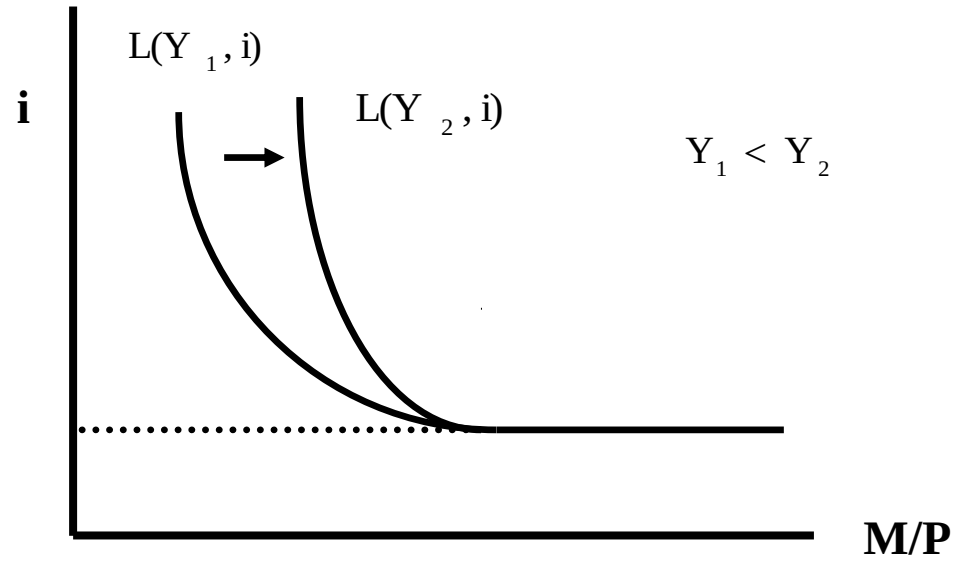
Demand for money

- **Keynes labeled total demand for money as liquidity preference**
- **Particular case: at very low rates of interest nobody wants to invest into bonds (everybody expects the interest to increase, so price of bond to decrease) and people hold only money (money demand is infinitely interest elastic – graphically horizontal)**
- **Demand for money:**

,

$$\frac{M^D}{P} = L(Y, \; i)$$

$$L_Y > 0, \quad L_i \leq 0$$



Why - then - lasting high unemployment?

- **Given the reality of Great Depression, Keynes was seeking for an explanation of long-lasting underemployment equilibrium**
- **In the longer-run, nominal wage assumption not realistic**
- **BUT: when – with flexible wages - his model converges to full employment equilibrium, he needed additional assumptions to allow for a theoretical possibility of stable underemployment equilibrium**
- **He, indeed, claims that two cases arise when underemployment equilibrium exists:**
  - **Liquidity trap**
  - **Interest-inelastic investment function**

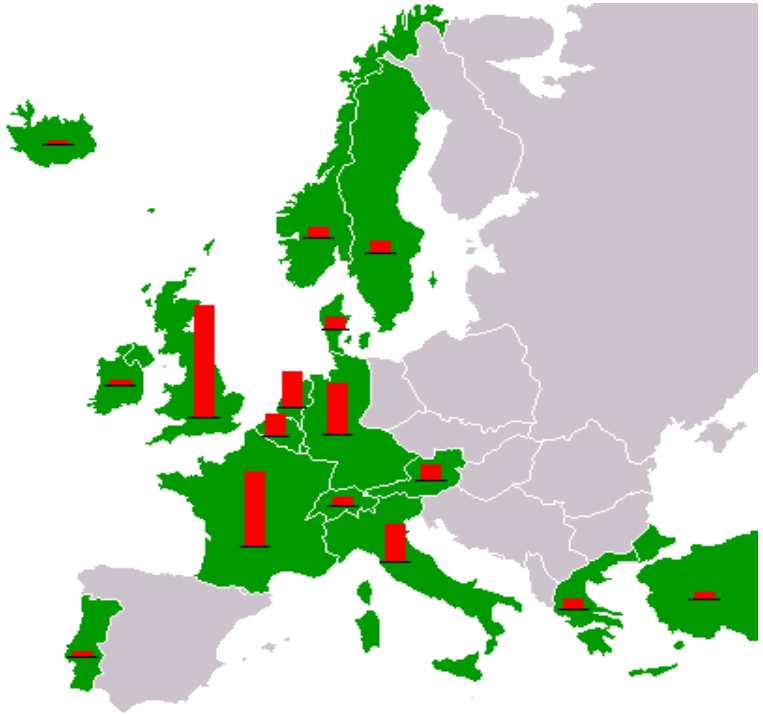
VI. The post-war reconstruction, Bretton Woods system, neoclassical synthesis

Basic numbers

Period: 1948-1951

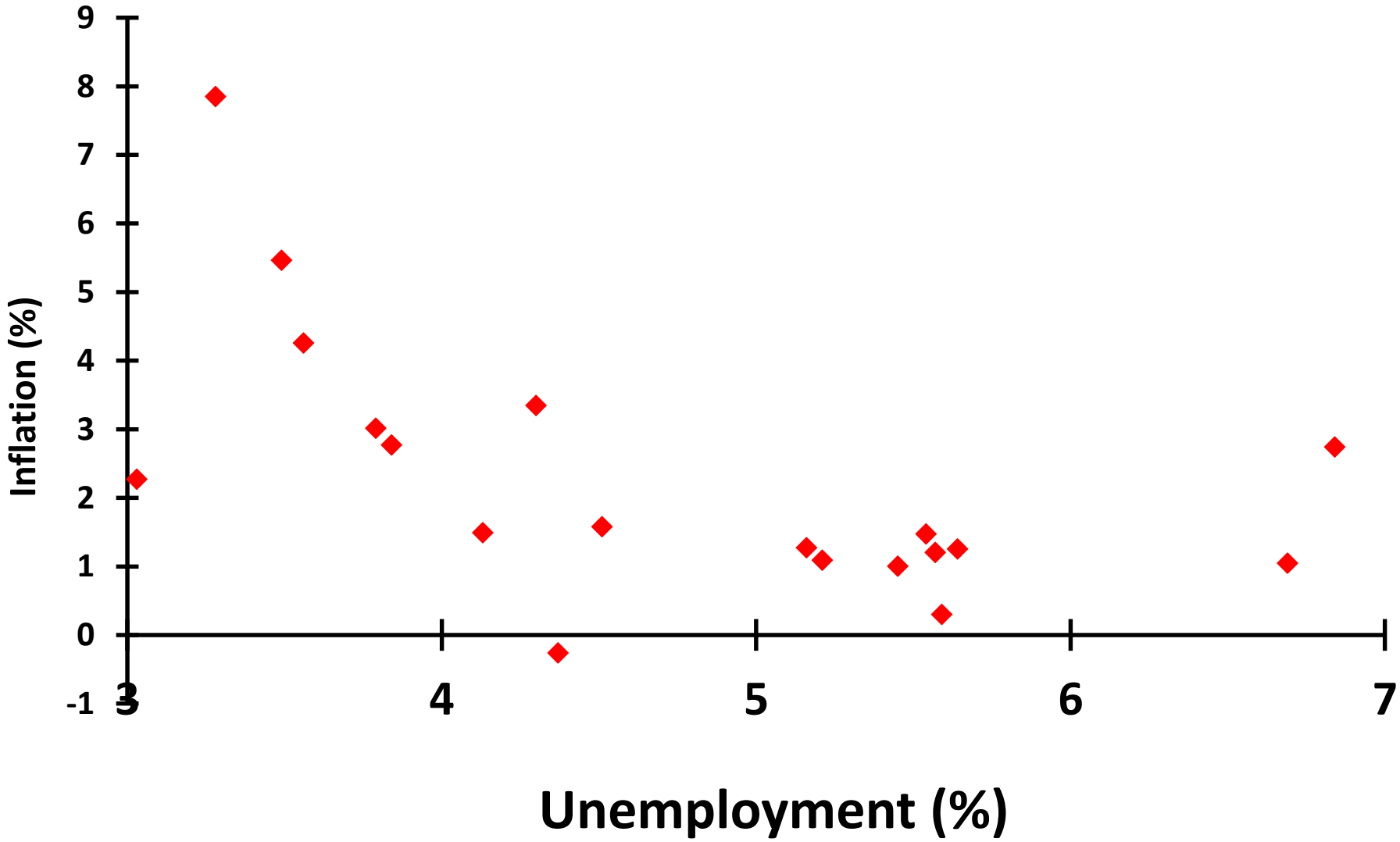
Total amount: 12,741 MUSD

A		488
B, L		777
DK		385
F		2296
FRG		1448
GR		366
ICL		43
IRL		133
I		1204
NL		1128
N		372
P		70
S		347
CH		250
TR		137
UK		3297



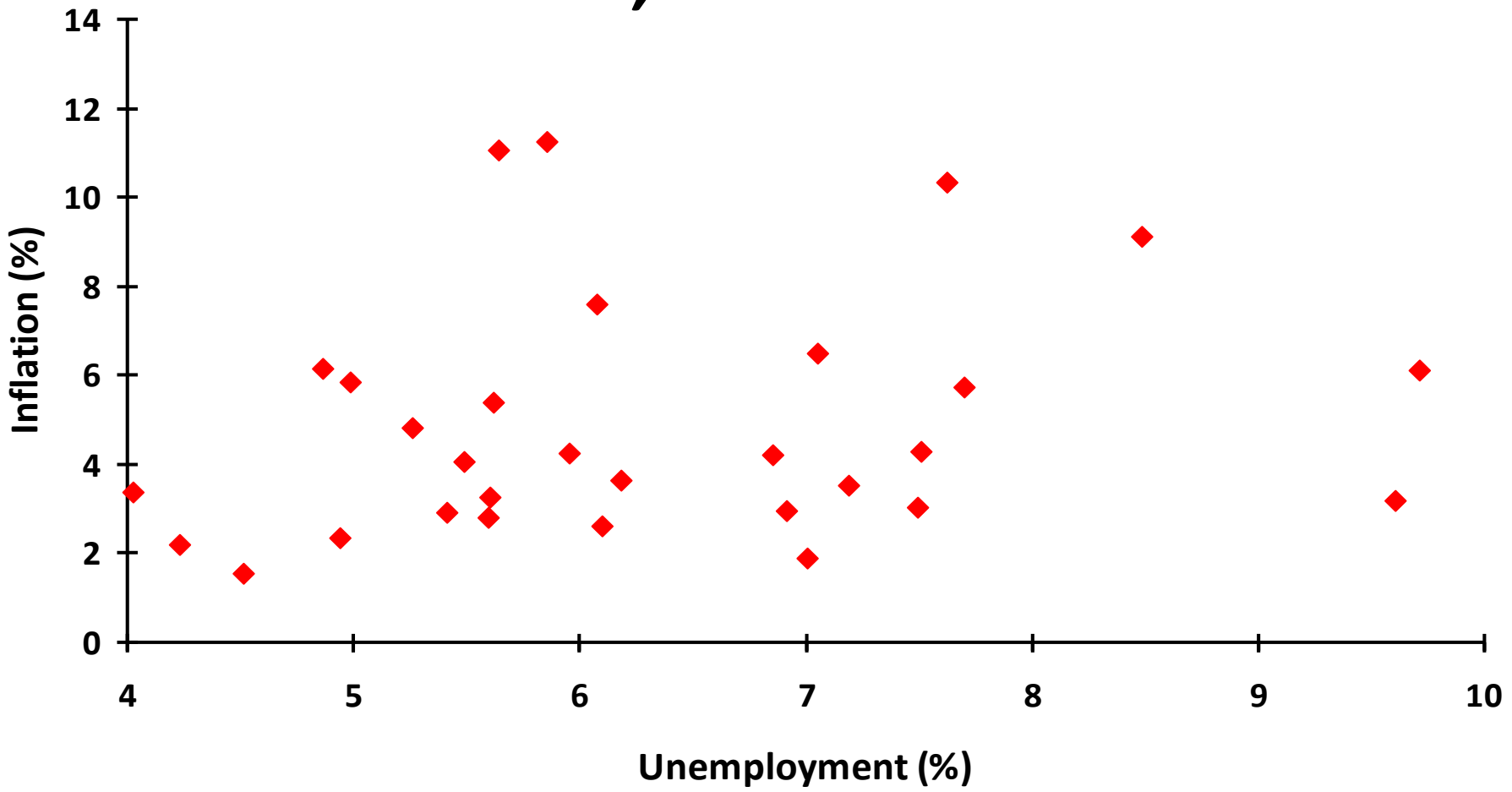
Inflation and unemployment

USA, 1950 - 1969



VII Economic policies of 1950s-1960s, crisis of Phillips curve, monetarism

Inflation and unemployment
USA, 1970-2000



Milton Friedman

- 1912-2006
- Economist, monetarist
- 1946-1977: University of Chicago
- 1977-2006: Hoover Institution
- Essays in Positive Economics, A Theory of Consumption Function, Capitalism and Freedom, A Monetary History of the United States (1867-1960) - with Anna Schwartz, Free to Choose, etc.
- Nobel Prize in Economics, 1976
- Considered as conservative, in reality liberal economist
- Advisor to President Nixon

VIII. End of post-war miracle and of Bretton-Woods
New Classical Economics
New Keynesian Economics

Friedman: implications of expectations-augmented Phillips curve

- **Difference from Keynesian approach: there is no permanent trade-off between inflation and unemployment**
  - **In the short-run yes, but as soon as inflationary expectations adjust, the trade-off disappears → output and unemployment returns to natural levels**
- **Crucial: how the expectations are formed?**
- **Both monetarists and neoclassical synthesis - adaptive expectation hypothesis (AEH):**

$$P^{e} = P_{-1} + (1 - \lambda)\left(P^{e}_{-1} - P_{-1}\right), \quad 0 < \lambda < 1$$

- **or**

$$\Delta P^{e} = \lambda\left(P - P^{e}\right)$$

IX. Oil shocks and disinflation policies (1973-1985)

Monetary restriction after 1979

- **Strong, convincing commitment to monetary restriction, quick change of expectations and quick impact:**
  - **Real interest ↑, Y↓, P ↓, real (and nominal) appreciation of USD**
  - **The credibility problem: most people did not believe that Reagan/Volcker team will be politically strong to reduce inflation quickly**
  - **Behaviour according rational expectation models: un-anticipated policy → decrease of output and increase of unemployment**
  - **Whenever credibility established → growth resumed and unemployment started to fall**
- **Strong monetary contraction and subsequent volatility of macroeconomic parameters → impact on the position of USD**
- **Originally, very strong commitment towards floating ExR <u>without intervention</u> (“benign neglect”)**

X. Stabilization policies
1980 - 2007

Very quick stabilization

	Mean 1980-84	1984	1985	
			Jan-Jul	Aug-Dec
CPI	8.7	15.2	14.0	2.6
ExR $ off.	8.8	15.9	13.6	0.0
ExR $ black	x	16.1	13.3	0.0
Nom. Wage	9.0	16.5	11.0	2.1
M3	10.7	15.9	13.3	3.0
Bank credit	9.1	16.8	13.9	3.9
BudgDef %	10.2	15.0	12.0	4.0
Unempl.%	4.9	5.9	6.0	7.5
BoP, M$	-210.0	-480.0	340.0	

NAIRU

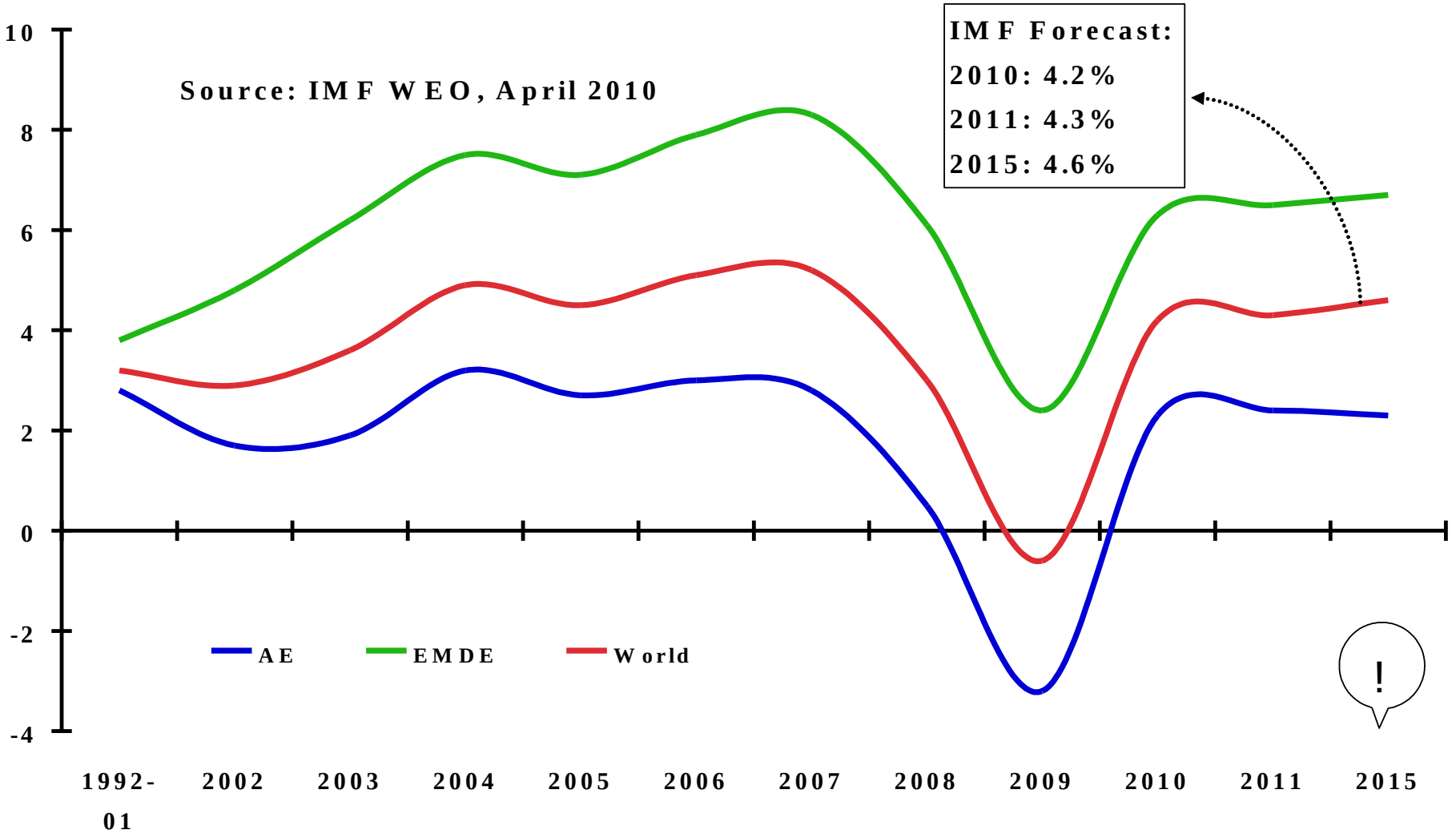
- One possibility: try to specify an unemployment rate that keeps inflation constant
- Remember expectations-augmented Phillips curve:

$$\pi = \pi_{-1} - \varepsilon(u-u^*) \quad \text{or} \quad \pi - \pi_{-1} = -\varepsilon(u-u^*)$$

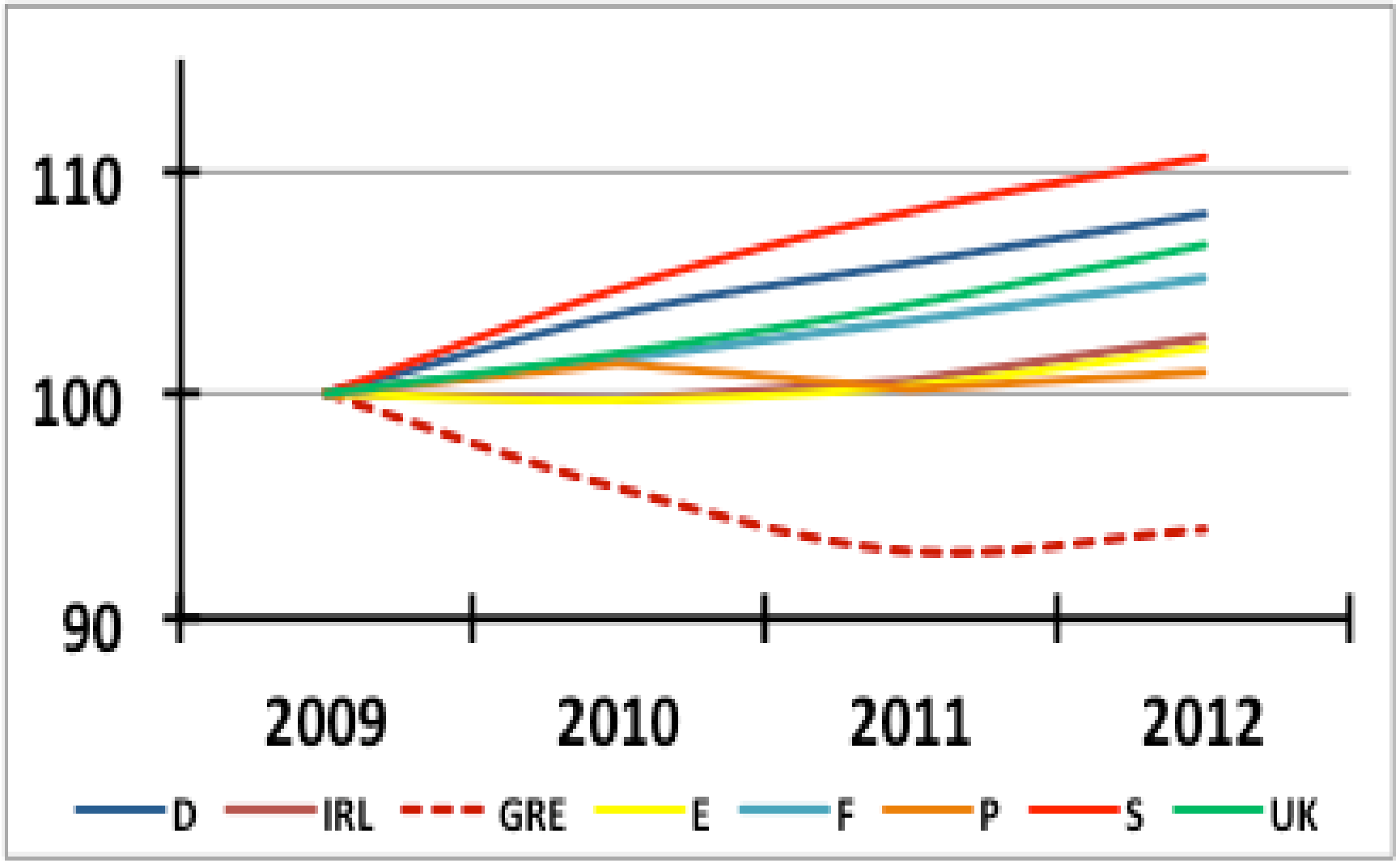
- If $u^* = u$, then inflation is constant ($\pi - \pi_{-1} = 0$)
- Possible interpretation of natural rate of unemployment: Non-Accelerating Inflation Rate of Unemployment (NAIRU)

XI. Financial and economic crisis 2008-2009

Growth according IMF: World



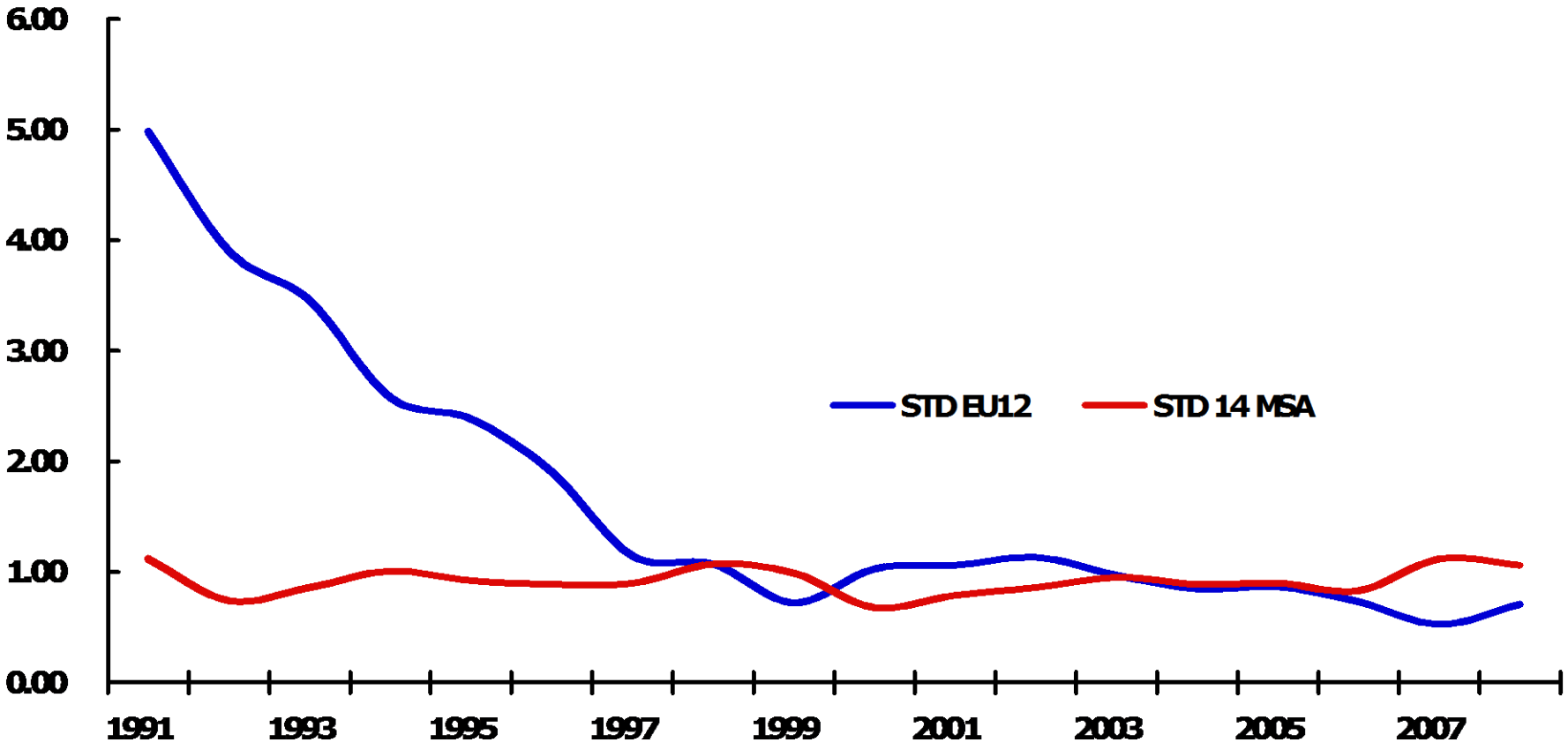
Euro zone: growth divergence



XII. The Birth and the Crisis of the Euro

HICP, EU 12 vs. US regions

standard deviations



Zdroj: Ameco, vlastní propočty

Unit labor costs

Germany vs. peripheral countries