

The Transition to a Monetary Union

The Maastricht Treaty

- Signed in 1991
- Blueprint for monetary unification in Europe
- Based on two principles
 - Gradualism: the transition towards monetary union in Europe is seen as a gradual one,
 - Treaty in 1991, EMU in 1999, euro introduced in 2002
 - Cf. German reunification: agreed in late 1989, carried out as of 1 July 1990.
 - Conditionality: entry into the union is conditional on satisfying convergence criteria.

Convergence criteria

Each candidate country must satisfy:

1. Price stability:

- Inflation rate not more than 1.5%pts above the average of three best-performing Member States;
- Current target value: 2.6% (FN/DK/SE),

2. Interest rates:

- Long-term interest rate not more than 2 %pts above the average of the three lowest-inflation Member States;
- in Aug 2004, the reference value was 6.4%

3. Deficit: government budget deficit of no more than 3% of GDP;

- if not satisfied, budget deficit should be declining continuously and substantially and come close to 3%,
- or the deviation from the reference value should be exceptional and temporary and remain close to the reference value

4. Debt: government debt of no more than 60% of GDP

- if not satisfied, government debt should diminish sufficiently and approach the reference value at a satisfactory pace'.

5. Exchange-rate stability:

- Membership in the ERM II and observance of the normal fluctuation bounds ($\pm 15\%$) for at least 2 years;

Why convergence requirements?

- The OCA theory stresses *micro*-economic conditions for a successful monetary union
 - labor market flexibility,
 - labor mobility
 - convergence in business cycles (symmetry of shocks)

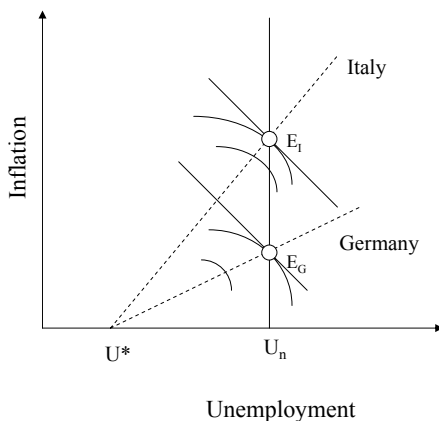
The Treaty stresses *macro*-economic convergence

- inflation,
- interest rates,
- budgetary policies

Inflation convergence

- Future monetary union might have an inflationary bias
- Barro-Gordon model

Inflation bias in a monetary union



- Before EMU, Germany has low inflation; Italy has high inflation.
- Differences are due to different preferences concerning inflation and unemployment.
- Once in the union, common central bank takes over.
- If inflation reflects average preferences, it will be located between E_I and E_G .
- Germany loses; Italy gains.
- Germany will require Italy to demonstrate that it has espoused the same strong preference for price stability.
- Italy can demonstrate this by lowering its inflation, even at the cost of a temporary increase in unemployment.
- Germany will also want the ECB to be similar to the Bundesbank.

Arbitrary Nature of the Rule

- Countries outside the EMU can determine reference values for inflation and interest rates;
- With the EU membership growing, the probability that the reference value will be an arbitrarily low figure is not negligible;
- The average of the best-performing EU members made good sense before the EMU was formed;
- EMU inflation would be easier to rationalize now that the EMU is reality.

Budgetary convergence

- A country with a high debt-to-GDP ratio has an incentive to generate surprise inflation to erode the real value of long-term debt.
- Low-debt countries therefore may insist that the debt-to-GDP ratio of the high-debt country be reduced prior to entry into the monetary union.
- Low budget deficit is necessary to keep public debt from growing faster than the nominal GDP.

Budgetary convergence

- Countries with a large debt face a higher default risk
- Once in the EMU, they may press the ECB for a bailout in the event of a default.
- *No-bailout* clause was incorporated into the Maastricht Treaty.

Arbitrary nature of the rule

- Why should the debt be stabilized at 60%?
- 60% was the average debt-to-GDP ratio in the European Union when Maastricht Treaty was being negotiated.
- Depending on the current growth rate of nominal GDP, different deficit figure may be appropriate.
- A low-debt country can have deficit above 3%, a high-debt country requires a much lower deficit or surplus to bring its debt down to 60% of GDP.

Exchange rate stability

- It prevents countries from manipulating their exchange rates so as to enter with a more favorable (depreciated) exchange rate.

Exchange rate stability

- According to the Treaty, countries should maintain their exchange rates within the 'normal' band of fluctuation (without changing the band) during the two years preceding their entry into the EMU.
- The 'normal' band is currently +/-15%;
- Denmark observes a narrower band (+/-2.25%) but is allowed to remain out of the EMU.
- Estonia, Lithuania and Slovenia joined the ERM II in June 2004, Cyprus and Malta in April 2005 and Slovakia in November 2005.
- Sweden chose not to join the ERM II so as to avoid membership in the EMU following the negative verdict of the referendum on membership.

Interest rate convergence

- Excessively large differences in the interest rates prior to entry could lead to large capital gains and losses at the moment of entry into the EMU .

Interest rate convergence: Example

- Suppose the UK long-term bond rate is 5% while the euro long-term bond rate is 4%.
- At the moment of entry the euro-sterling rate will be fixed irrevocably.
- Bondholders will arbitrage, until the return on euro and sterling bonds will be equalized.
- This will lead to a drop in the price of euro bonds and an increase in the price of sterling bonds.
- Thus, holders of euro bonds will make capital losses, and holders of sterling bonds will make capital gains.
- If entry is announced well in advance, interest rates should converge gradually before entry (as they did in cases of Spain, Portugal, Italy and Ireland).

How to fix the conversion rates during the transition

- Madrid Council of 1995 implied that on 1st January 1999 one ECU would be converted into one euro.
- The conversion rates of the national currencies into the euro had to be equal to the market rates of these currencies against the ECU at the close of the market on 31 December 1998.
- This created potential for self-fulfilling speculative movements of exchange rates prior to 31 December 1998.
- The effect of such speculative movements could be to permanently fix the wrong exchange rates.

- In order to avoid this, the euro conversion rates were announced in advance (in May 1998).
- If these announcements were credible, the market would smoothly drive the market rates towards the pre-announced fixed conversion rates.
- This is exactly what happened. Transition was very smooth with minimal turbulence, and volatility of exchange rates declined over time.

Table 6.1 Conversion rates of EMU currencies into the euro

Belgian franc	40.339900
Spanish peseta	166.386000
Irish punt	0.787564
Luxembourgish franc	40.339900
Austrian schilling	13.760300
Finnish marka	5.945730
German mark	1.955830
French franc	6.559570
Italian lire	1936.270000
Dutch guilder	2.203710
Portuguese escudo	200.482000

Relations between the 'ins' and 'outs'

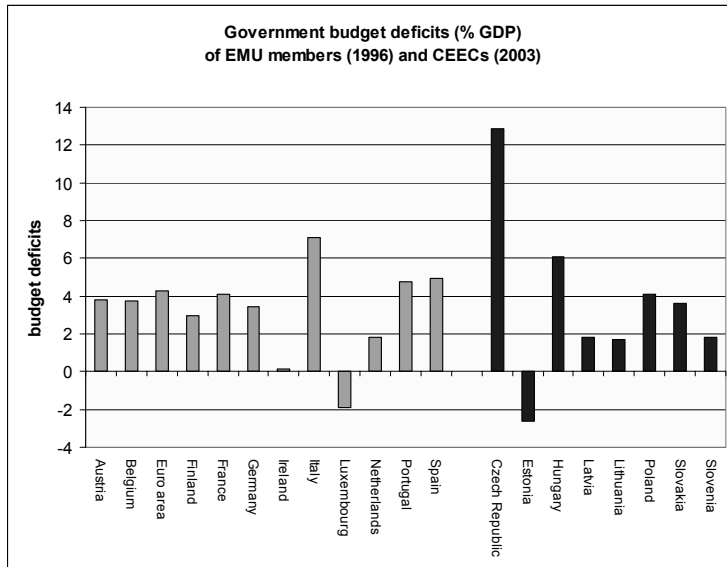
- A new exchange rate mechanism (ERM-II) has replaced the old Exchange Rate Mechanism (ERM) since 1 January 1999.
- Adherence to ERM-II is voluntary.
- Its operating procedures are determined in agreement between the ECB and the central banks of the 'outs'.
- ERM-II is based on central rates around which relatively wide margins of fluctuations are set.
- Countries may choose different margins.

- The anchor of the system is the euro.
- When the exchange rates reach the limit of the fluctuation margin, intervention is obligatory.
- This obligation will be dropped if the intervention would conflict with the objectives of price stability in the EMU-countries or in the outside country.
- The ECB has the power to initiate a procedure aimed at changing the central rates.

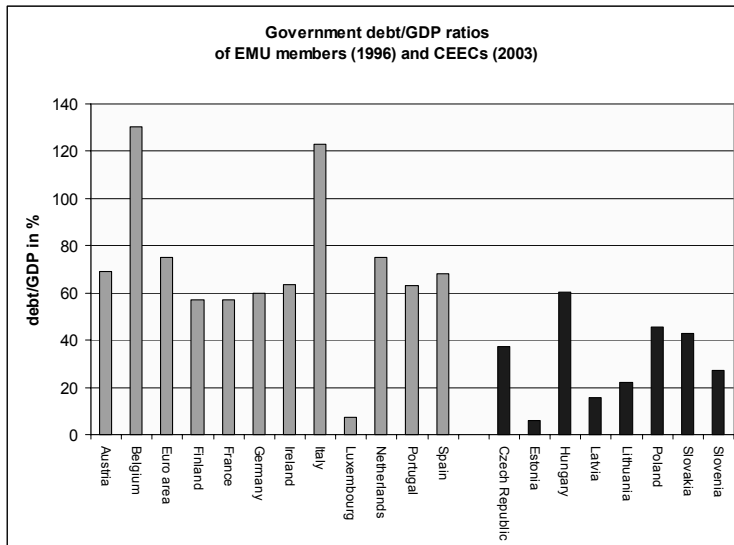
Convergence of the new member countries

- When the new member states of the EU signed the Accession Treaty, they committed themselves to enter the eurozone some time in the future.
- The exact moment at which this will happen depends on the fulfillment of the Maastricht convergence criteria.
- These are the same criteria that the present eurozone member countries had to satisfy (equal treatment).

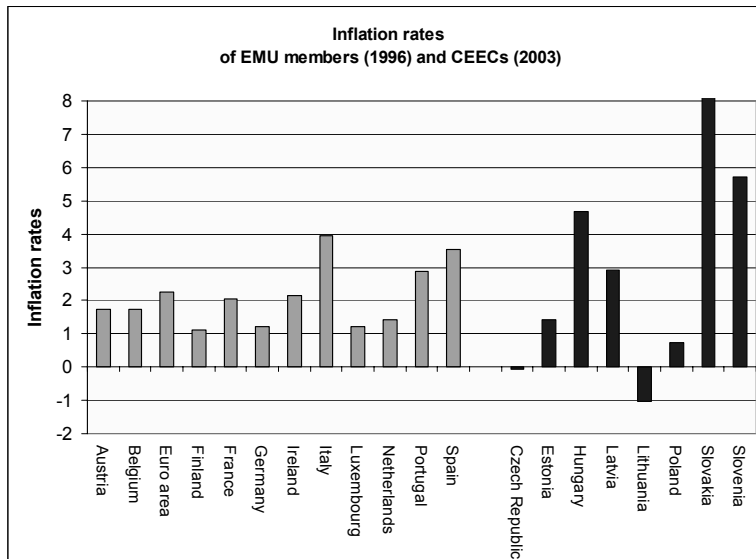
How do the new members fare?



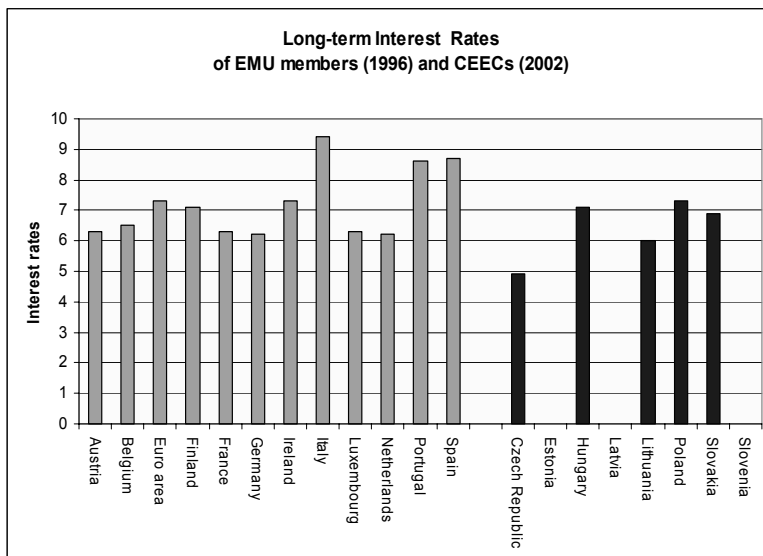
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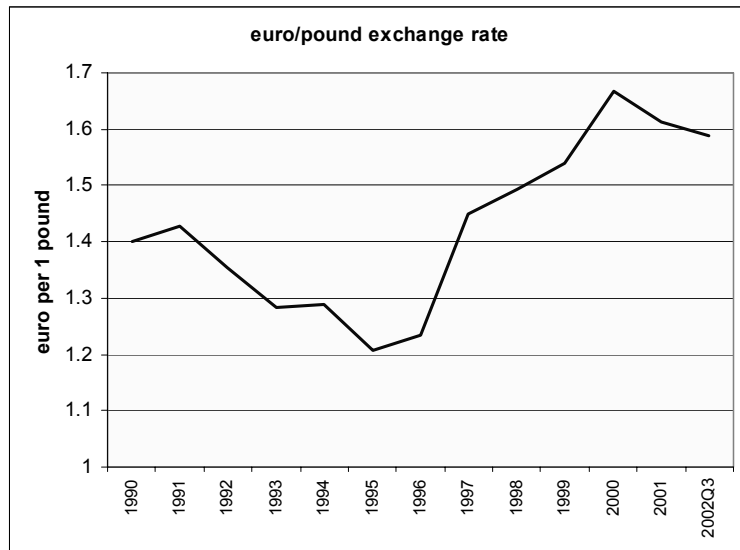


How do the new members fare?



Is the UK ready to enter the euro-zone?

- UK satisfies most convergence criteria
- Two economic sources of UK hesitation to join:
 - a) There is evidence that UK may not form an optimal currency union with the rest of the EU.
 - b) The pound may be overvalued relative to the euro.
 - If the UK enters the euro-zone at too high an exchange rate it might be saddled with low competitiveness for years to come, putting downward pressure on economic growth in the UK.



Conclusion

- The transition towards EMU was based on two principles
 - gradualism
 - Macro-economic convergence.
- These principles will continue to be important for the new member countries, and for the UK, Denmark and Sweden when these countries decide to join the euro zone.
- The technical problems associated with the start of EMU were solved remarkably well.