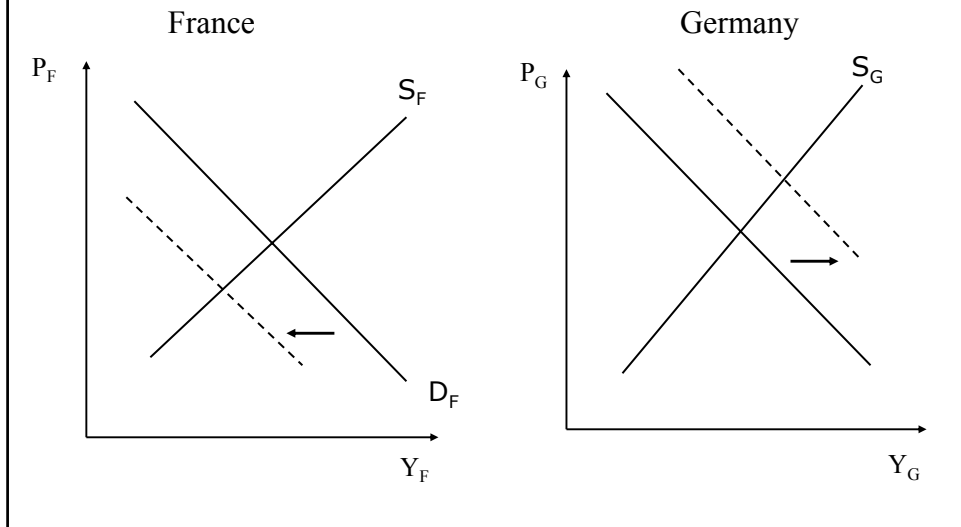


Monetary Policy in Euroland

Asymmetric shocks

- ‘Perfect asymmetry’: positive shock in one country is offset by a negative shock in the other country.
- The ECB, which is concerned with price stability and employment in Eurozone as a whole, aggregates the numbers.
- As a result, aggregate inflation and unemployment are unchanged and no change in policies is called for.
- No stabilization and greater fluctuation of unemployment in the individual countries.

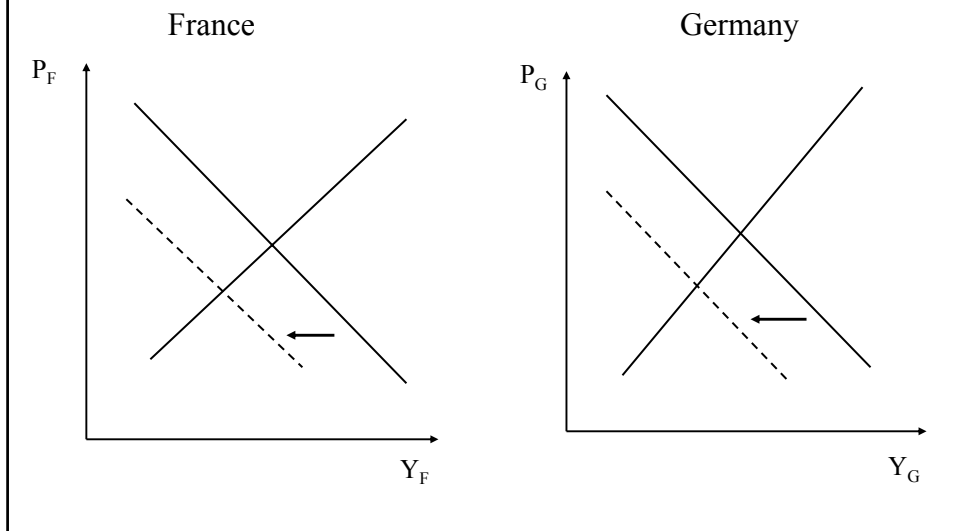
Asymmetric Shock



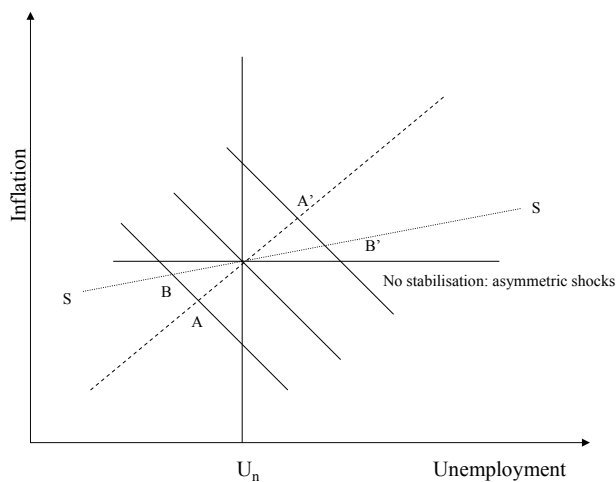
Symmetric shocks

- The shock is exactly the same in both countries
- The ECB observes an increase in unemployment in Euroland as a whole and implements expansionary monetary policy.
- Although from the French point of view, the shock is the same as in the asymmetric case, the ECB is now capable of stimulating the economy in Germany and France
- The increase in unemployment is reduced by ECB response.

Symmetric Shock

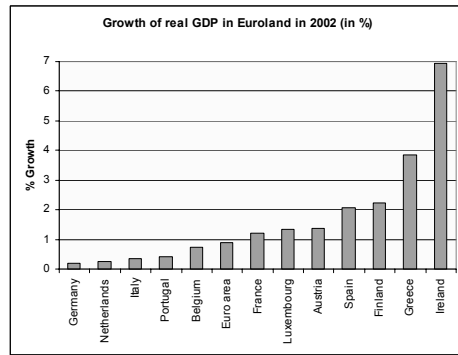
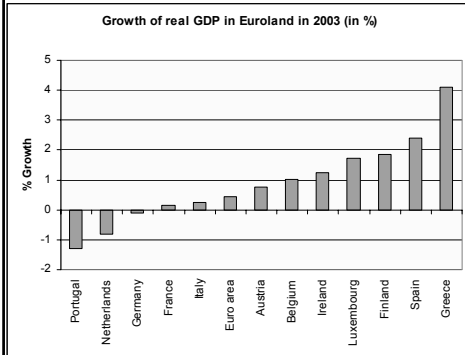


Monetary policy when shocks are not perfectly asymmetric

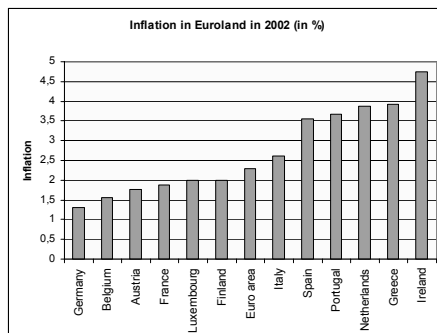
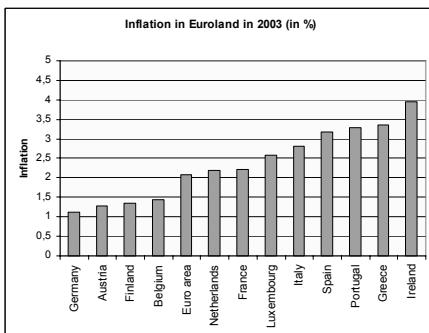


- Horizontal line: asymmetric shocks (no stabilisation).
- AA' line: symmetric shocks (full stabilisation).
- Intermediate case: shocks have an asymmetric component.
- Stabilisation is given by a line such as the SS line.
- Unemployment fluctuates between B and B'.
- Too little stabilisation from the point of view of the individual country.
- Degree of asymmetry determines slope of SS line.
- This may lead to conflicts between nations and ECB.

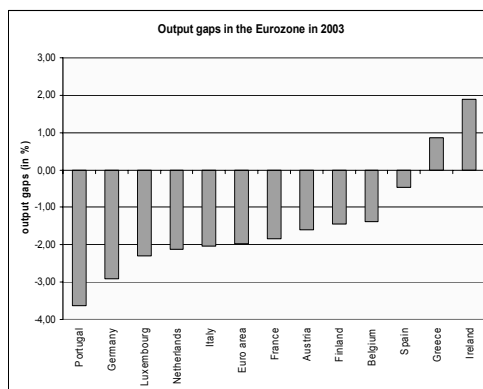
Have asymmetric shocks been important in Eurozone?



Wide range of experiences

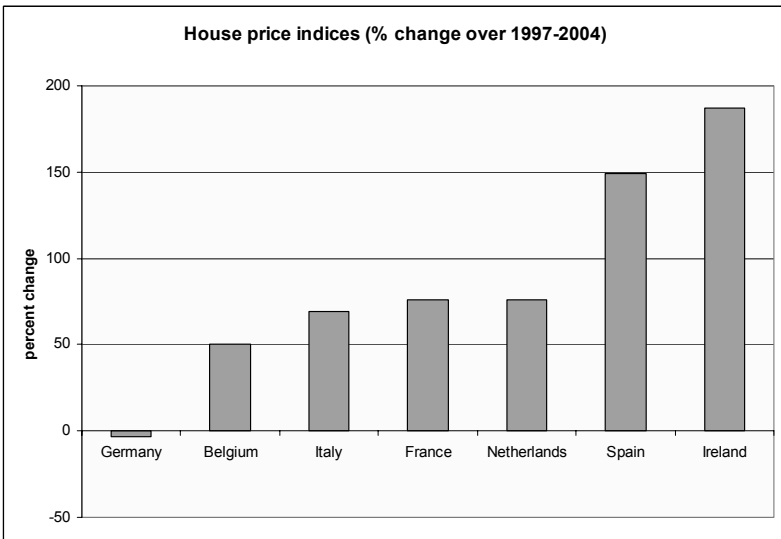
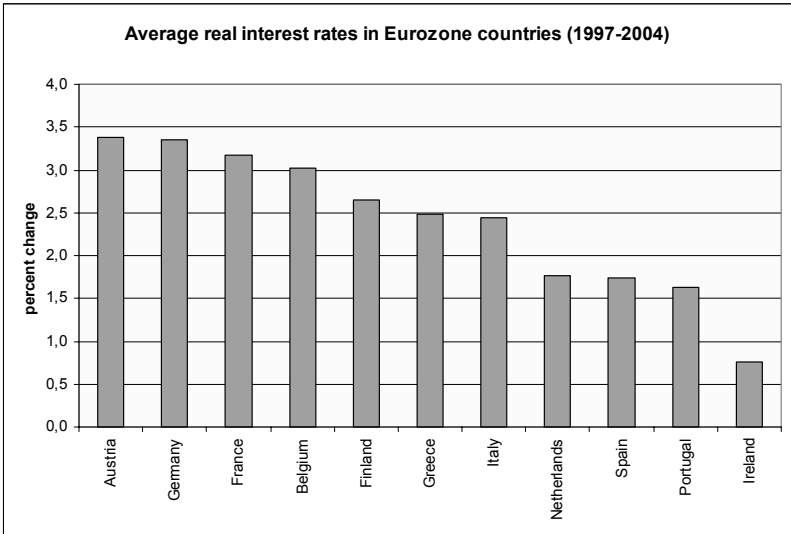


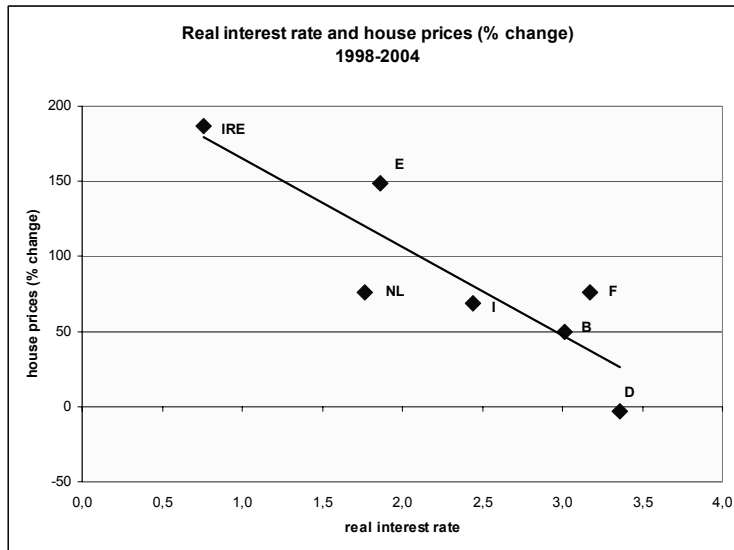
Output gap: measure of business cycle fluctuations



Asymmetric shocks and housing prices

- Large inflation differences within Eurozone
- Combined with the same nominal interest rate in the Eurozone
- Create large differences in real interest rates





Monetary Policy Strategy of the ECB

- Definition of the objectives
- Instruments to achieve these objectives.

1. The objectives

- Governing Council:
 - ‘price stability shall be defined as a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%’.
- Thus target range of inflation is 0% to 2%.
- Recent ‘clarification’: “inflation should remain below but close to 2%
- Price stability is to be maintained over the ‘medium run’
- The ECB, however, does not define what the

2. The instruments

- Two pillars
- **First pillar:** Money stock is reference value
- Implicit model:

$$m + v = p + y$$

$$\Delta m + \Delta v = \Delta p + \Delta y$$

$$\Delta m = \Delta p^* + \Delta y^f - \Delta v^f$$

where Δp^* is the target inflation rate, Δy^f and Δv^f are forecasted values

Example (1999): $\Delta y^f=2\%$, $\Delta v^f=-0.5\%$ \rightarrow $\Delta m=4.5\%$ (M3)

The same procedure of that of the Bundesbank.

- **Second pillar:** vague
- Wide range of other indicators
 - wages
 - energy prices
 - exchange rate
 - yield curve
 - real activity
 - fiscal indicators
 - possibly other variables.

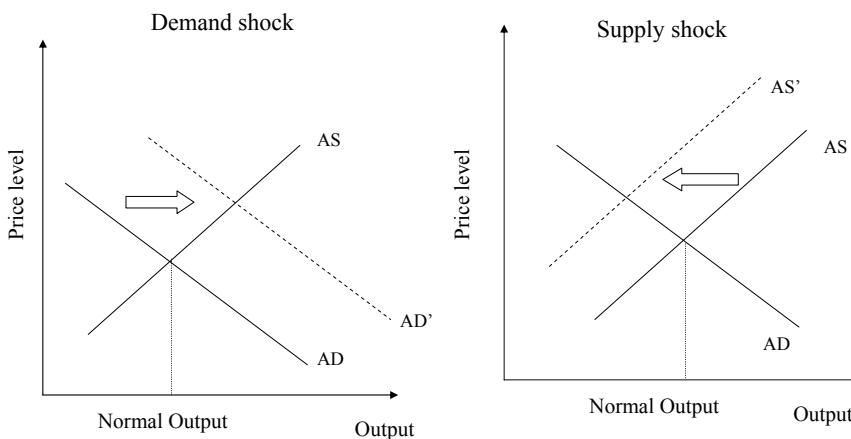
Monetary Policy Strategy of the ECB: An evaluation

- Selection of the target
 - Is inflation target of at most 2% too low?
- Two-pillar strategy

Selection of the target

- Inflation is the sole target, no formal reference to output stabilization.
- In interpreting its mandate, ECB has been influenced by the theory of *flexible inflation targeting* as developed by Svensson (1996, 2000).
 - By stabilizing the price level, the central bank also stabilizes the output level
 - Only if output fluctuates because of demand shocks
- In this view there is no need to target output explicitly.

Shocks in aggregate demand and supply



- When demand shocks occur, inflation targeting leads the ECB to implement restrictive monetary policy that shifts the AD curve back.
- This stabilizes both prices and output.
- If supply shock occurs; there is tradeoff between output and inflation stabilization.
- Restrictive monetary policy will lower inflation but also aggravate the output fall.
- ECB has made clear that when such a tradeoff occur it will choose for inflation stabilization.

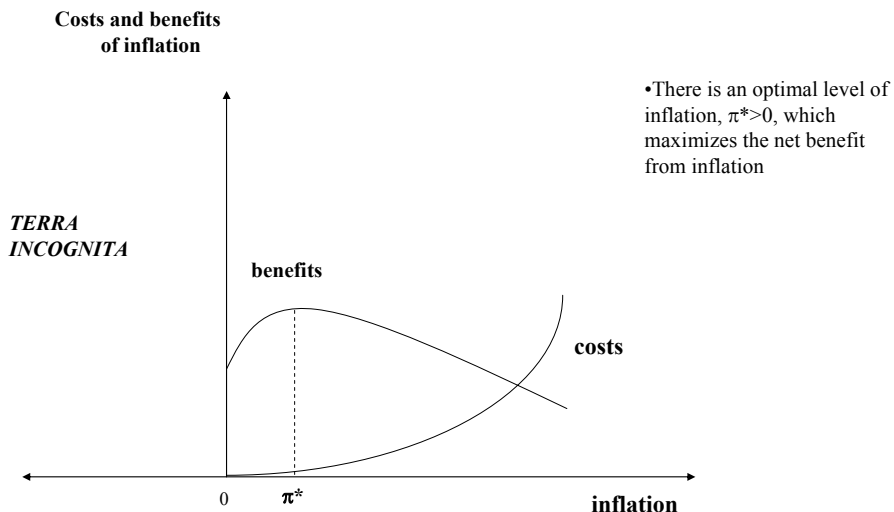
Is the inflation target of at most 2% too low?

1. Rapid technological progress changes the conventional measures of inflation
 - The true inflation rate is overestimated by 0.5% to 1.5% a year due to quality bias.
2. Some inflation may be good for the economy
 - It works as a lubricant and allows for more flexible adjustments in real wages.
 - Argument is based on money illusion

Is the inflation target of at most 2% too low?

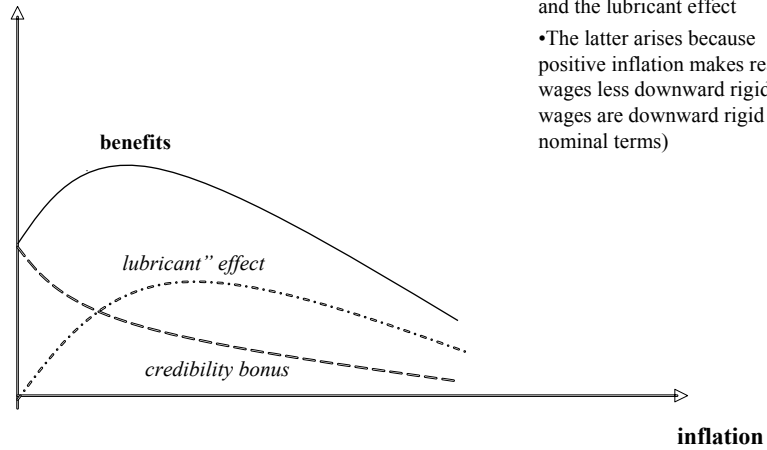
- 3 There is an increasing risk that inflation may drop below 0% at some point.
 - Falling prices are dangerous and they can push the economy into a deflationary spiral (see Japan).
 - With 2% EMU-average inflation target, deflation is likely to occur in some countries

Costs and benefits of inflation



Benefits of inflation: lubricant and credibility

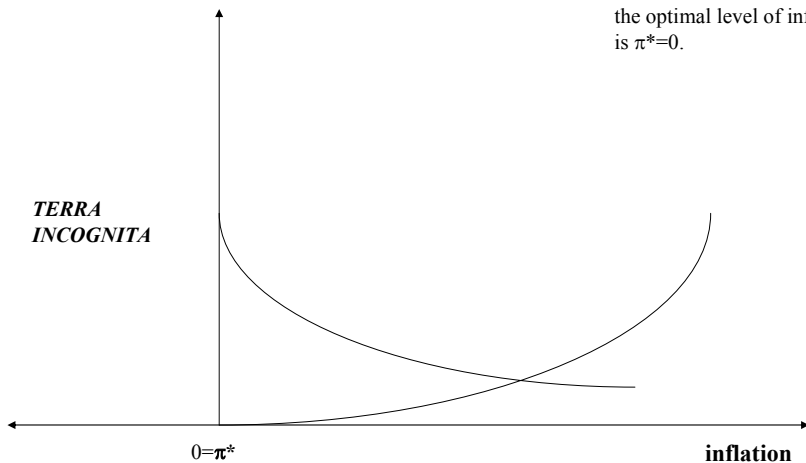
Benefits of inflation



- The benefits of inflation include the credibility effect, and the lubricant effect
- The latter arises because positive inflation makes real wages less downward rigid (if wages are downward rigid in nominal terms)

ECB view (no lubricant effect)

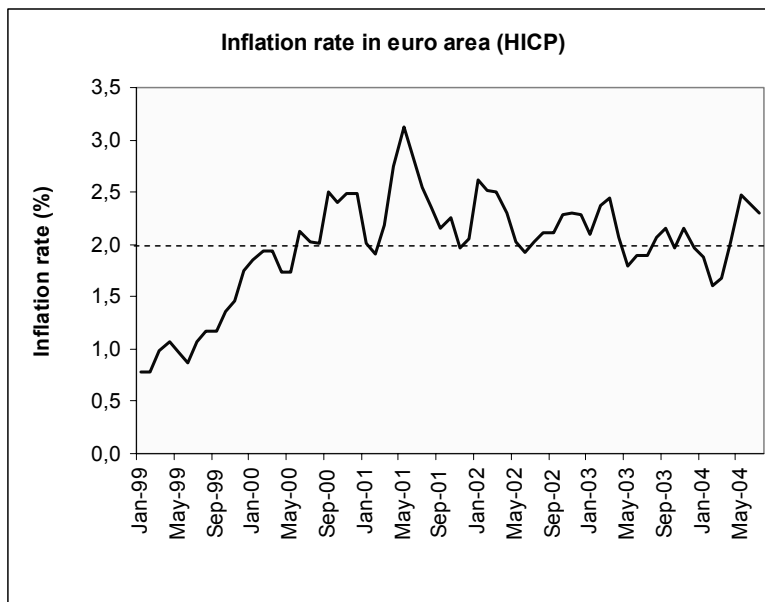
Costs and benefits of inflation



- Without the lubricant effect, the optimal level of inflation is $\pi^*=0$.

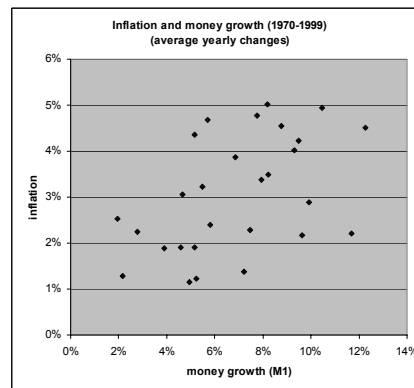
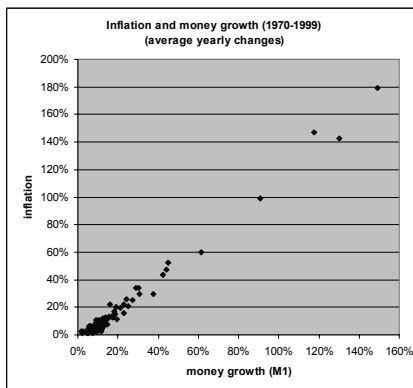
Summary

- 2% maximum inflation rate is too low.
- Low target more likely to be exceeded: credibility issue
- ECB should redefine its target to be 2-3%.
- It should allow some flexibility around this new target in a symmetric way.
- Bank of England: target = 2%, inflation below the target is seen as just as bad as inflation above the target
- Goal vs instrument independence: currently, the ECB enjoys both.



Excessive reliance on the money stock?

- Bundesbank legacy
- Most central banks use inflation targeting nowadays
- Money stock is not a good predictor of inflation in low-inflation environment
- Measuring money stock in a world of financial innovation
- Since May 2003, the ECB has given less prominence to money stock
- Inconsistency between words and deeds: credibility issue



Inflation vs money-stock targeting

	<i>Instrument</i>		<i>Intermediate target</i>		<i>Ultimate target</i>
MS-targeting	Interest rate	⇒	Money stock	⇒	Inflation
Inflation-targeting	Interest rate	⇒	Inflation forecast	⇒	Inflation

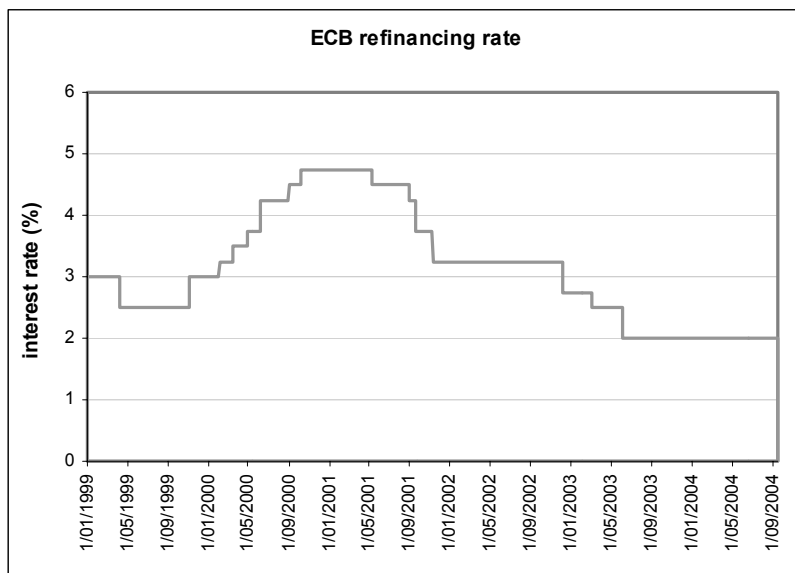
- Inflation targeting is superior to money stock targeting (see Svensson (1998)).
- The reason is that with inflation targeting the central bank uses information of all the variables (including the money stock) that will affect future inflation.
- The inflation forecast is then the best possible intermediate target.

Instruments of monetary policy in Euroland

- Three types of instruments:
 - Open market operations,
 - Standing facilities (credit lines),
 - Minimum reserve

1. Open market operations

- Buying and selling of securities with the aim of increasing or reducing money market liquidity.
- ECB uses system of tenders, called *main refinancing operations*.
- Governing Council sets the interest rate that will be applied in the main refinancing operations.
- This interest rate affects the market interest rates.



2. Standing facilities

- Aim: to provide/absorb overnight liquidity.
- The Governing Council fixes the marginal lending rate (1% above the interest rate used for OMO).
- No borrowing limit if banks have collateral.
- The marginal lending rate acts as a ceiling for the overnight market interest rate.
- Banks can use also the *deposit facility* to make overnight deposits (1% below the interest rate used for OMO).

3. Minimum reserves

- By manipulating reserve requirements the ECB can affect money market conditions.
- ECB pays interest on minimum reserves.
- The ECB uses the minimum reserve requirements as an instrument to smooth short term interest rates.