

# Communicating European monetary policy: Is there any role for money?

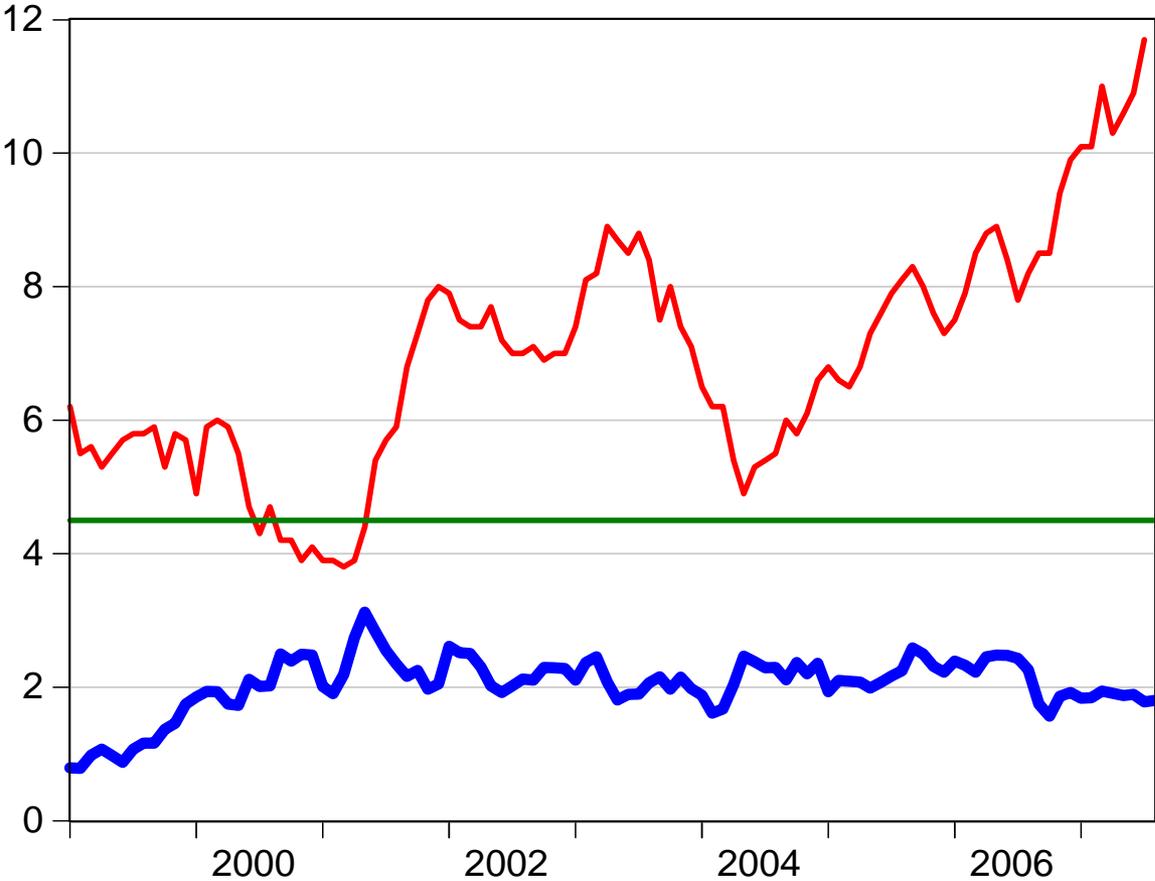
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Presentation at the European Union Studies Center,  
the Graduate Center, CUNY  
and the European Union Center of New York,  
October 10, 2007

# Good performance of the European Central Bank (ECB) since 1999

- The ECB has largely fulfilled its mandate as enshrined in the Maastricht Treaty, i.e., to safeguard price stability
- Inflation – measured in terms of the harmonized index of consumer prices (HICP) – slightly above the ECB's objective of less than 2 percent

Percent (year over year)



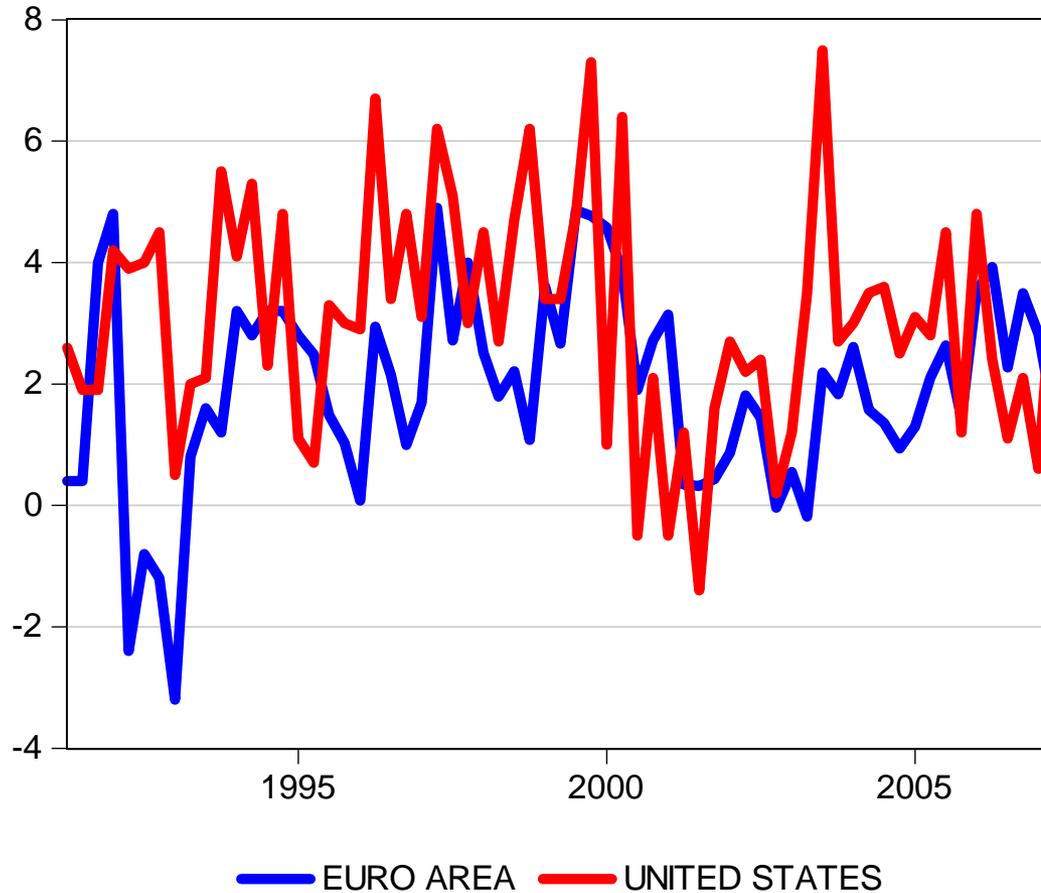
- HICP INFLATION
- M3 GROWTH
- REFERENCE VALUE OF ECB

Source: ECB data bank

- Real growth in the euro area less satisfactory than in the U.S.
- However, the euro area has been quite successful in creating new jobs
- The ECB is sometimes blamed for not paying sufficient attention to real growth (recently by the new French president Sarkozy)
- Criticism unfair. Low growth in the euro area explained mainly by structural deficiencies such as inflexible labor markets and reluctance to promote integration of the services sector
- Growth performance has improved recently

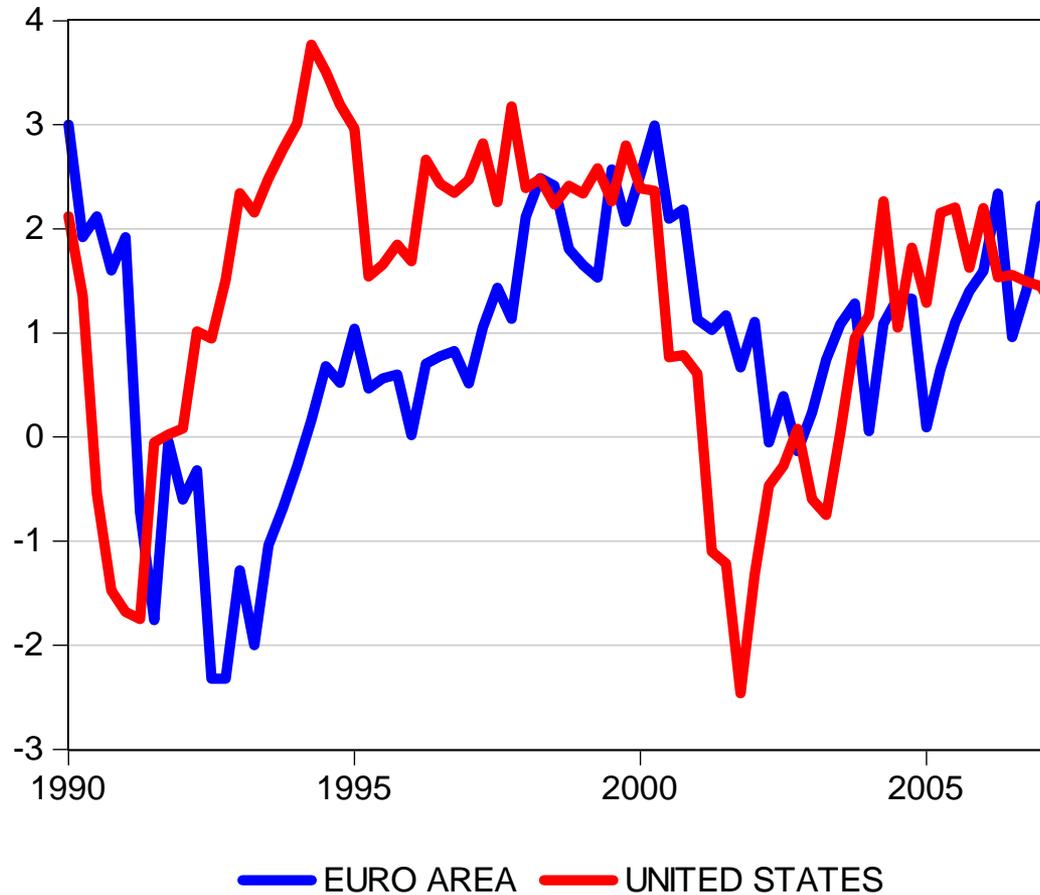
# Euro area and U.S. real growth

Annualized percentage change over preceding quarter



# Euro area and U.S. employment

Annualized percentage change over preceding quarter



# ECB Policy Concept

- Two-pillar approach to setting policy
- First pillar: ECB monitors a wide range of data and uses various econometric models for forecasting real growth and inflation
- Second pillar: ECB pays special attention to monetary aggregates, notably the money stock M3, and other monetary indicators
- Second pillar used to „cross check“ information drawn from first

# The ECB's second pillar

as described by ECB Board member Stark

- The ECB does not focus exclusively on M3, but analyzes a full set of monetary, financial and economic information
- It employs a wide range of models, including money demand equations, time series indicator models and structural general equilibrium models
- The models are supplemented by informed judgment about prospective structural changes in the monetary and financial sectors of the euro area

# Second pillar much criticized

- Many central banks, including the Fed, no longer pay much attention to money
- Well-known economists such as Woodford and Svensson also argue that money has no role in monetary policy
- In new Keynesian macro models used widely today central banks influence economic activity through interest rates; money demand is a residual that does not bear on the transmission of monetary impulses to the economy

# Rejection of money overdone

- Some central banks still find that money is helpful in assessing inflation risks
- Not clear whether popular new Keynesian models provide a proper view of the monetary transmission mechanism
- However, even if money can be used to forecast inflation, monetary targets – as advocated by monetarists in 40 or 50 years ago – are no longer useful
- Inflation targeting superior approach

# Nevertheless, the ECB's communication of its second pillar inadequate

- Upon the introduction of the euro, the ECB rightly declined to fix a monetary target as the German Bundesbank had done
- Instead it set a reference value for the money stock M3
- M3 has been above its reference value since 2001

- Despite M3 growth above reference value, inflation has not picked up significantly
- The ECB argues that the surge in M3 growth in 2001-2003 was due to portfolio shifts into liquid assets; portfolio-based excess money growth is not inflationary
- By contrast, the surge in M3 growth since 2004 has been based on banks granting additional credit; credit-based excess money growth is inflationary
- Thus the second pillar provided strong arguments in favor of tightening monetary policy

# ECB arguments unconvincing

- Distinction between portfolio- and credit-based money growth more than a nice ex-post rationalization of why acceleration in money growth did not always trigger inflation?
- Whether the ECB's distinction has predictive power remains to be seen

# ECB is also following other approaches

- It is trying to forecast inflation from money growth
- It claims that money is a useful tool for forecasting inflation
- Especially low-frequency movements in money lead inflation
- True, but mainly before the advent of the euro
- Some evidence that the predictive power of money has deteriorated recently

# Forecasting inflation from money fraught with difficulties

- Suppose ECB always meets its inflation objective
- It reacts correctly to any shocks disturbing price stability
- Money growth will vary a great deal but inflation will not
- Money cannot be used to forecast inflation
- However, may still mean that inflation can be forecast from *destabilizing* movements in money

# Inadequacies in the ECB's analysis call for better approaches

- In the following, I present such an approach
- My approach draws information from standard estimated money demand functions for the euro area
- Can be used to „cross check“ the policy information derived from the first pillar
- Employs information not necessarily used in standard neo-Keynesian models, i.e., information on the income elasticity of money demand

- My approach can be used if standard money demand functions are reasonable stable, i.e., a stable relationship exists between real money demand, on the one hand, and real GDP and interest rates on the other
- Sensible money demand functions may be estimated even if the ECB always meets its inflation objective
- My approach is therefore immune to the difficulties associated with forecasts of inflation from money growth

# Application of procedure to M3

- Do simple stable money demand functions exist for euro-area M3?
- Stable for period before introduction of euro but less so thereafter
- Researchers have been able to restore stability by relating real M3 demand to other variables, in addition to real GDP and interest rates
- Such variable include wealth, measures of uncertainty in financial markets and inflation expectations

- For my procedure to produce sensible results, stable but sophisticated money demand functions are not necessarily helpful
- My procedure involves forecasts of money demand for the following year
- Relying on sophisticated money demand functions, therefore, I have to forecast the evolution of such elusive variables as wealth, uncertainty and inflation expectations
- To get around such problems, I estimate exclusively simple money demand functions

# Outline of procedure

- The ECB regularly estimates demand functions for real M3 (nominal M3 divided by the HICP)
- It relates real M3 to real GDP and interest rates
- Rolling samples of mostly 40 quarters
- As to interest rates, the differential between the 10-year bond yield and the 3-month euribor rate, for the most part, provides the best fit
- It estimates long-run money demand functions based on cointegration analysis

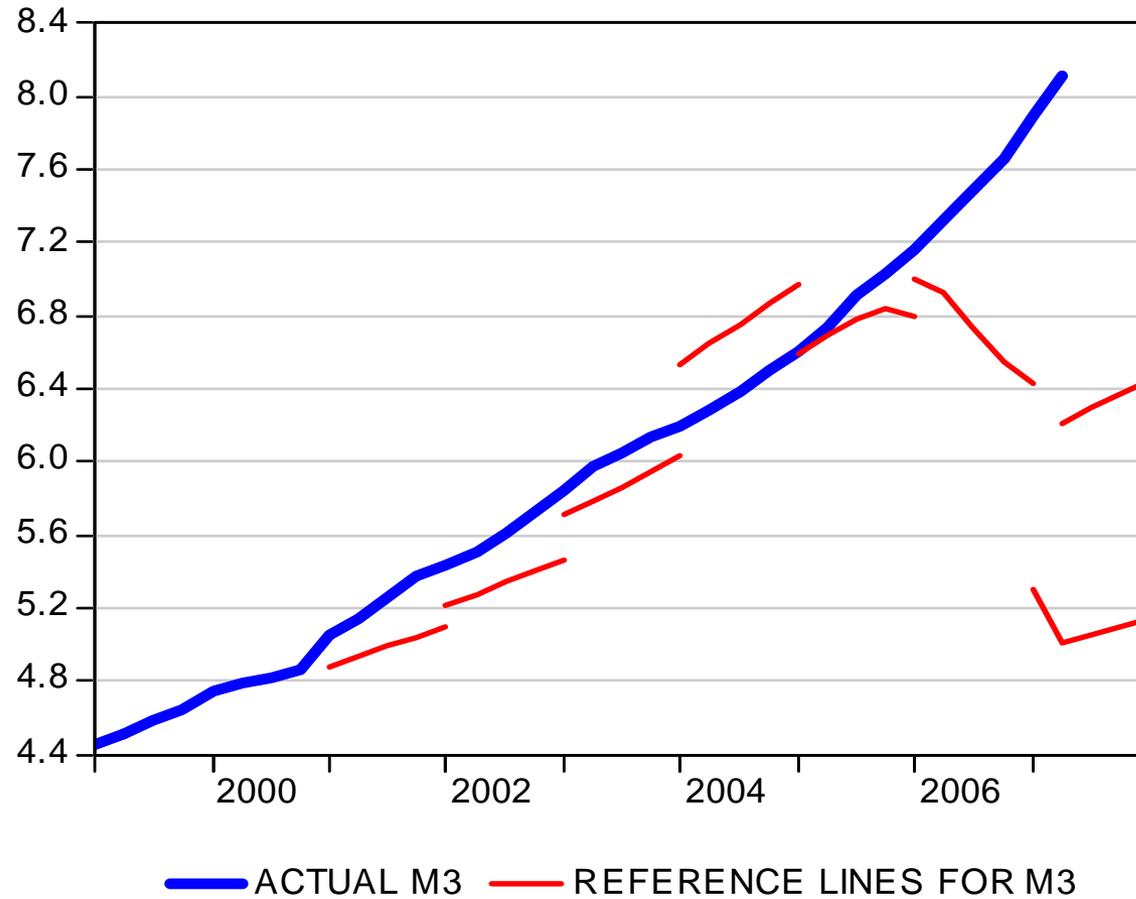
- At the end of each year, it forecasts the evolution of nominal M3 demand consistent with its inflation objective of less than 2% (for simplicity, I assume exactly 2%), growth in potential real GDP and the portion of the interest rate differential attributable to its current policy stance
- Potential real GDP is measured by the log-linear trend in the actual values, the trend is in turn extrapolated to the following year

- The portion of the interest rate differential attributable to ECB's current stance is determined by a regression of the interest rate differential on the ECB's refinancing rate
- To forecast the evolution of M3, the ECB assumes that it will not change monetary policy in the following year, i.e., its refinancing rate will remain unchanged
- Based on the forecasts of money demand, the ECB derives reference lines for the level of M3
- The reference lines are consistent with its inflation objective, its measure of potential growth and its current policy stance

- Since the reference lines are adjusted at least annually, they shift as a result of changes in the ECB's policy stance and changes in the estimated parameters of the money demand function
- The actual evolution of M3 may be compared with the reference lines
- Deviations from the reference lines may mean (1) that the information drawn from the first pillar is faulty and should be reviewed or (2) the estimated money demand functions are unreliable
- The ECB must use its judgment to decide which of the two possibilities is the most likely

# Reference lines for M3

Trillions of euro



# Reference lines for M3

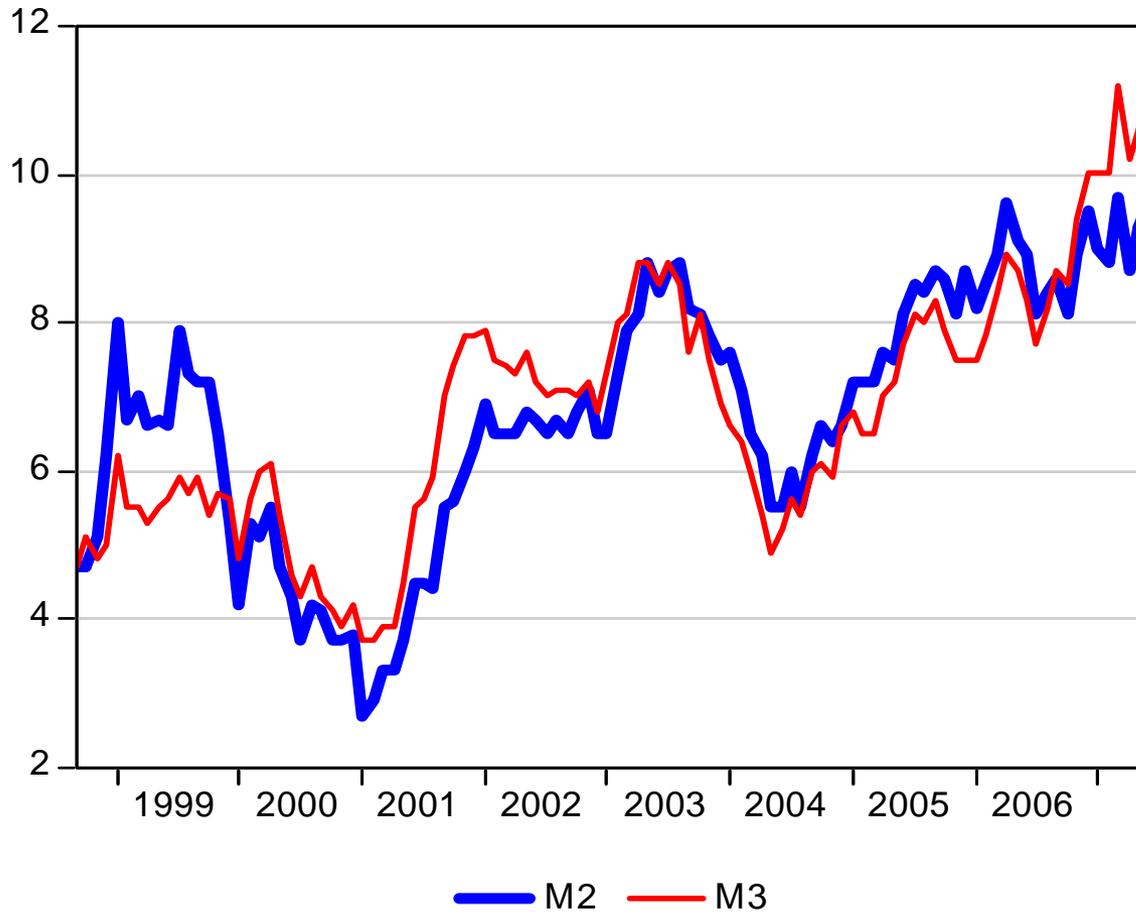
- Suggest that ECB may have been too expansionary in 2001-2003 and too restrictive in 2004
- However, in 2006 and 2007, reference lines move about a lot, due to instabilities in the estimated income elasticity of real money demand; they do not produce useful information for these two years
- Therefore, the ECB currently should not pay a lot of attention to M3

# Application to M2

- M2 and M3 quite closely correlated, but less so in recent years
- Application of my procedure may yield more convincing results for M2
- Due to data limitations, reference lines can be constructed only for the period 2004-2007
- Estimated income elasticity for M2 also somewhat unstable; therefore, I derive pairs of reference lines reflecting high and low estimates of income elasticity

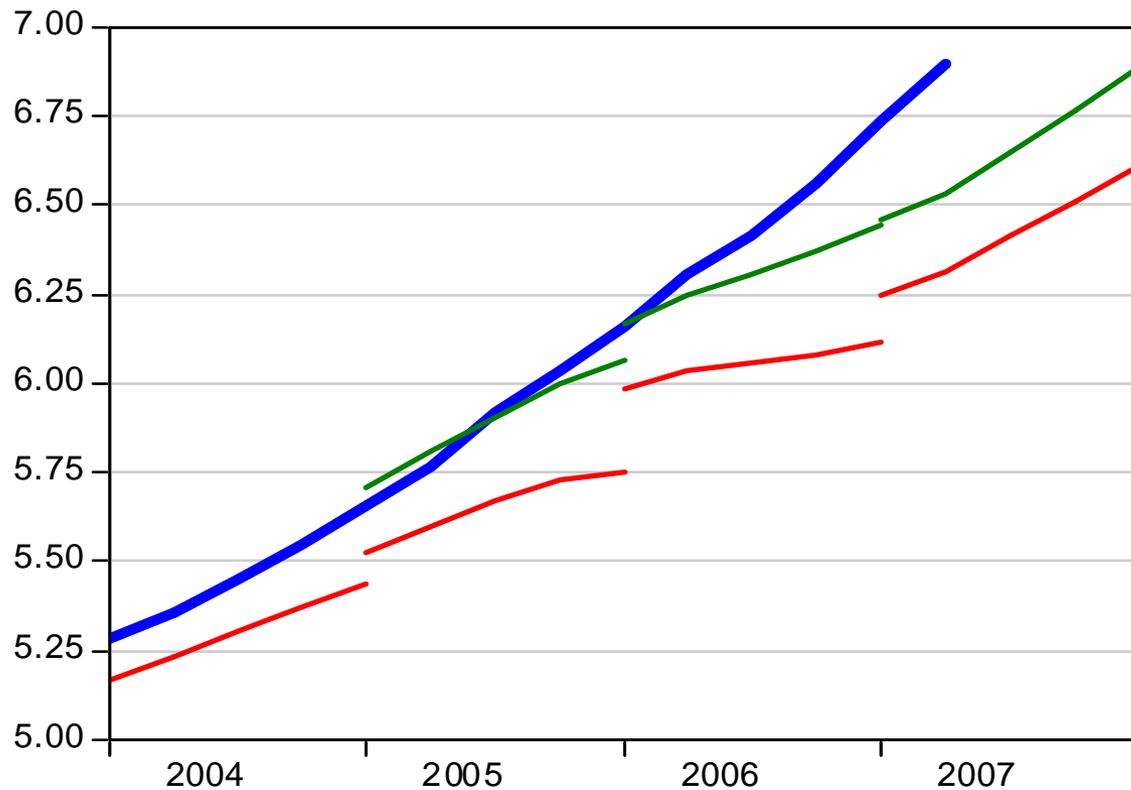
# Relationship between growth in M2 and M3

Year-on-year monthly rates of change



# Reference lines for M2

Trillions of euro



- ACTUAL M2
- M2 REFERENCE LINES: SAMPLE PERIOD STARTING 1998Q2
- M2 REFERENCE LINES: SAMPLE PERIOD PAST 22 QUARTERS

# Reference lines for M2

- Despite some instability in money demand, sensible results
- Certainly more sensible than the ECB's reference line shown in first chart
- Monetary policy about right until the beginning of 2006
- Too expansionary since
- Accords with views of ECB
- However, the ECB currently steers a cautious course because of the current turmoil in global financial markets