

## **Box I**

### **Annual review of the reference value for monetary growth**

At its meeting on 14 December 2000 the Governing Council of the ECB reviewed the reference value for monetary growth. On the basis of a thorough review of the assumptions underlying its derivation, the Governing Council decided to reconfirm the existing reference value for monetary growth, namely an annual growth rate of 4½% for the broad aggregate M3. This decision was taken on the grounds that the available evidence continues to support the assumptions underlying the derivation of the first reference value in December 1998 (and its confirmation in December 1999), namely those for trend potential output growth and the trend decline in M3 income velocity in the euro area. This box provides some background information on this decision.

The monetary policy strategy of the ECB uses a two-pillar framework in order to organise the assessment of risks to future price stability (see the article entitled “The two pillars of the ECB’s monetary policy strategy” in the November 2000 issue of the ECB Monthly Bulletin). The first pillar of the strategy is a prominent role for money. This prominent role is signalled to the public by the announcement of a quantitative reference value for the growth rate of M3. Several studies have provided empirical evidence in support of this prominent role for M3 and confirm that the conditions for announcing a reference value, in particular a stable money demand relationship and satisfactory leading indicator properties of M3 for future inflation, are satisfied for the euro area.

The reference value for M3 growth is derived using the identity embodied in the relationship between money, on the one hand, and prices, real GDP and the velocity of circulation of money, on the other. Reflecting the medium-term orientation of the single monetary policy, the derivation is based on the ECB’s definition of price stability and estimates of medium-term developments in potential output growth and M3 income velocity.

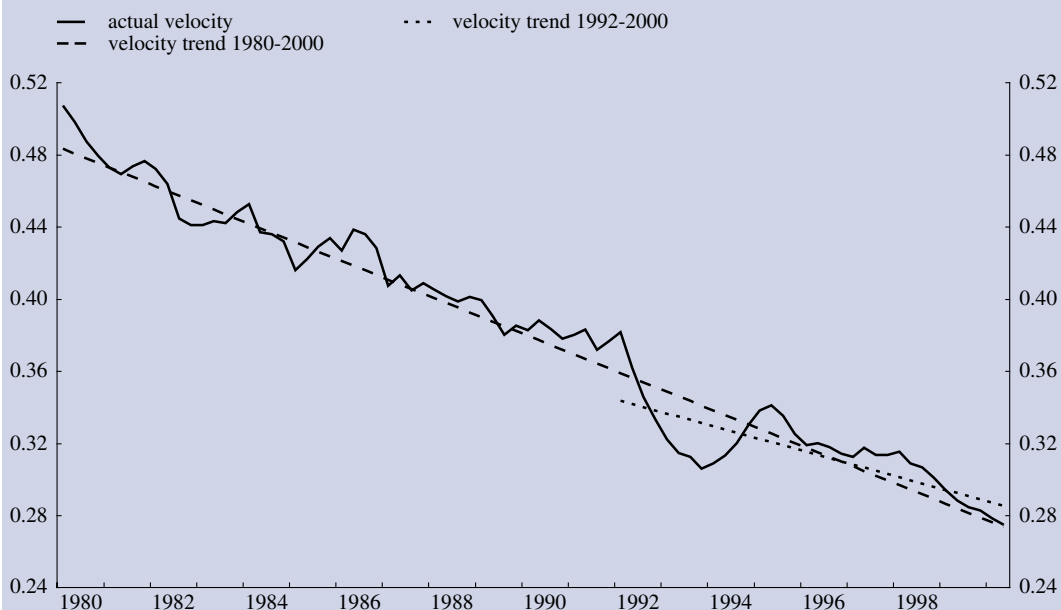
The Governing Council reviewed the medium-term assumptions for potential output growth and income velocity on the basis of experience with the reference value and the additional data that have become available since last year’s review.

The decline in M3 income velocity estimated over the sample from 1980 to 2000 is relatively close to 1% per annum on average (see the chart below). However, the simple trend measure may not be the best estimate of future medium-term trends, since it takes no account of the fact that the decline in velocity over the past two decades was partly caused by the fall in nominal interest rates and inflation rates over this period. In fact, these factors should have contributed to making the holding of liquid assets more attractive. However, as inflation rates and nominal interest rates have fallen to a level compatible with price stability over recent years, in the future there will no longer be a significant downward trend in these variables. Available money demand models take into account the effects on velocity stemming from past changes in inflation and interest rates. These studies, which are therefore preferable measures of the true velocity trend, support a range of between ½% and 1% for the annual decline in income velocity over the medium term. (See, for example, the studies by Coenen and Vega, 1999, “The demand for M3 in the euro area”, ECB Working Paper No. 6, and Brand and Cassola, 2000, “A money demand system for euro area M3”, ECB Working Paper No. 39.) On the basis of these considerations the Governing Council reconfirmed the assumption used in the derivation of the reference value in December 1998 (and confirmed in 1999) that M3 income velocity declines at a trend rate in the range from ½% to 1% per annum.

In addition, the Governing Council decided not to change the assumption used in the derivation of the reference value that the trend potential output growth rate lies in a range of between 2% and 2½%. The Governing Council acknowledged the progress that has been made in the euro area on structural reform.

### M3 velocity trends for the euro area

(log levels)



Sources: Eurostat, national data, ECB.

Note: Velocity is measured as the ratio of nominal GDP to M3. The underlying quarterly series include data for Greece (in a preliminary manner), are seasonally adjusted and constructed by aggregating national data converted into euro at the irrevocable exchange rates announced on 31 December 1998 and in the case of Greece determined on 19 June 2000. The M3 series is based on an index of adjusted stocks (for further details, see the technical notes in the "Euro area statistics" section of the ECB Monthly Bulletin). Quarterly monetary data are averages of end-month observations.

However, there is still no decisive evidence that a measurable and lasting increase in productivity growth in the euro area would warrant a significant upward revision in the assumption for trend potential output growth.

This notwithstanding, the Governing Council noted that the uncertainties surrounding estimates of medium-term development of potential output growth in the euro area have become skewed towards the upside. Against this background, the Governing Council has announced that it will carefully monitor further evidence on the possible acceleration of productivity growth in the euro area. The Governing Council also emphasised that potential output growth could be strengthened by further structural reforms in the labour and goods market. Naturally, the ECB's monetary policy would take such changes appropriately into account.

The Governing Council will continue to analyse monetary developments in relation to the reference value and will explain the implications of this analysis for monetary policy decisions to the public. As before, since monthly data are sometimes volatile, monetary developments relative to the reference value will be assessed on the basis of three-month moving averages of the annual growth rate of M3.

The Governing Council also noted that reconfirmation of the reference value implies continuity with the monetary policy strategy conducted in the past. The next annual review of the reference value is scheduled for December 2001.

Finally, it should be emphasised that monetary analysis under the first pillar always has to be seen in conjunction with the analyses of other economic and financial indicators under the second pillar of the ECB's monetary policy strategy. The announcement of a reference value does not entail a commitment on the part of the Eurosystem to correct mechanically deviations of monetary growth from the reference value. Rather, monetary developments are always thoroughly analysed in conjunction with other indicators in order to ascertain their implications for the risks to price stability over the medium term.