## **Box I** The review of the reference value for monetary growth

At its meeting on 2 December 1999 the Governing Council of the ECB reviewed the reference value for monetary growth. On the basis of a thorough review of the components underlying its derivation, the Governing Council decided to confirm the reference value which was first announced in December 1998, namely a 4½% annual growth rate for the broad monetary aggregate M3. As before, since monthly money 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 decided henceforth to undertake a regular annual review of the reference value for monetary growth. The next review will take place in December 2000. This box provides some background information to these decisions.

Given that the primary objective of the Eurosystem is the maintenance of price stability in the euro area, the Governing Council assigns a prominent role to money in the Eurosystem's monetary policy strategy in recognition of the monetary origins of inflation over longer horizons. This prominent role is signalled by the announcement of a quantitative reference value for the growth rate of a broad monetary aggregate. Within the first pillar of the Eurosystem's strategy, monetary developments are analysed for the information that they contain regarding the outlook for future price developments and the risks to price stability (see the article entitled "The stability-oriented monetary policy strategy of the Eurosystem" in the January 1999 issue of the ECB Monthly Bulletin).

Against this background, the reference value for monetary growth is an analytical tool which serves the achievement and maintenance of price stability. The reference value is therefore based on the Eurosystem's definition of price stability in such a way that prolonged or substantial deviations of monetary growth from the reference value normally signal risks to price stability.

To ensure that it fulfils this role, the reference value must relate to a monetary aggregate which is expected both to exhibit a stable relationship with the price level over the medium term and to be a leading indicator of future price developments. Empirical studies suggest that M3 possesses the required properties.

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

The Governing Council reviewed the estimates of medium-term developments in real GDP and M3 income velocity on the basis of practical experience with the reference value over the past year, the four extra quarters of data that have become available since the reference value was first derived and revisions to the historical data series for GDP and the monetary aggregates that have been introduced in the past 12 months. An assessment of the new evidence led the Governing Council to confirm the assumption used in the derivation of the reference value in December 1998 that M3 income velocity declines at a trend rate in the range from <sup>1</sup>/<sub>2</sub>% to 1% per annum (see the chart below).

In addition, the Governing Council concluded that there was no reason to change the assumption used in the derivation of the first reference value that the trend growth rate of real GDP lies in the range from 2% to 2½% per annum. At the same time, the Governing Council emphasised that the trend growth potential of the euro area would be considerably enhanced by structural reform in the labour and goods markets. The Eurosystem's monetary policy strategy would take such reforms into account, as appropriate.

On the basis of the Eurosystem's definition of price stability, which refers to an annual increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%, and these unchanged



Sources: Eurostat, national data, ECB calculations.

Note: Velocity is measured as the ratio of actual nominal GDP to M3. The underlying quarterly series are seasonally adjusted and constructed by aggregating national data converted into euro at the irrevocable exchange rates announced on 31 December 1998. M3: until Q3 1997 based on stocks; from Q4 1997 based on an index constructed using flows statistics. Quarterly data are averages of end-month observations. Nominal GDP: until Q4 1994 based on the ESA 79 system of national accounts; from Q1 1995 extended using the ESA 95 growth rates.

medium-term estimates of real GDP growth as well as the decline in M3 velocity, the Governing Council confirmed the reference value of a 41/2% annual growth rate for M3.

The reference value is a key component of the first pillar of the Eurosystem's monetary policy strategy. It should be recalled that analysis of monetary developments in relation to the reference value is undertaken in parallel with a broadly based assessment of the outlook for price developments and risks to price stability in the euro area as a whole, the so-called second pillar of the Eurosystem's strategy. This broadly based assessment encompasses a wide range of indicators. Monetary policy decisions aimed at the maintenance of price stability over the medium term are based on the information revealed by both pillars of the strategy.

The reference value is a medium-term concept and differs from a yearly monetary target in several respects. First, it is not a reference value for a calendar year, but an expression of a medium-term development over several years. For this reason, the generous liquidity situation in 1999 will have to be borne in mind when assessing the information content of monetary developments in the future. Second, the reference value does not entail a commitment on the part of the Eurosystem to correct mechanistically deviations of monetary growth from the reference value. Rather, monetary developments are thoroughly analysed in respect of their causes and implications for future price stability.

In view of this, the Governing Council also decided to retain a specific reference rate rather than announcing a reference range. The latter may be misinterpreted as suggesting that the Governing Council would react mechanically to a certain rate of monetary growth. Such an approach would be contrary to the Eurosystem's monetary policy strategy, which is based on two pillars, and to the reference value concept.

The Governing Council announced that it will continue regularly and thoroughly 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. The Governing Council also noted that confirmation of the reference value implies continuity with the monetary policy strategy conducted in the past and does not imply any changes to the Governing Council's assessment of the current monetary policy stance.