

Monetary Policy and the Real Economy – A Tradeoff?

What does the legal framework of the Eurosystem look like?

Article 105 of the Treaty specifies that the primary goal of the Eurosystem is to maintain price stability. Without prejudice to the objective of price stability, the ESCB is to support the general economic policies in the Community with a view to contributing to the achievement of the objectives of the Community as laid down in Article 2.

Moreover, Article 2 lays down that it is the task of the Community to promote a harmonious, balanced and sustainable development of economic activities, a high level of employment, sustainable and noninflationary growth, a high degree of competitiveness and convergence of economic performance and economic and social cohesion and solidarity among Member States.

What implications does this have for monetary policy? Is monetary policy able to attain several objectives simultaneously?

In general, in industrialized countries, central banks trigger the transmission mechanism of monetary policy by determining the level of interest rates. Credit markets act as the channel to production decisions and, in turn, price decisions; ultimately, these influence the rate of inflation. In other words, monetary policy exerts a short- and medium-term influence on both real variables (real GDP and employment) and inflation.

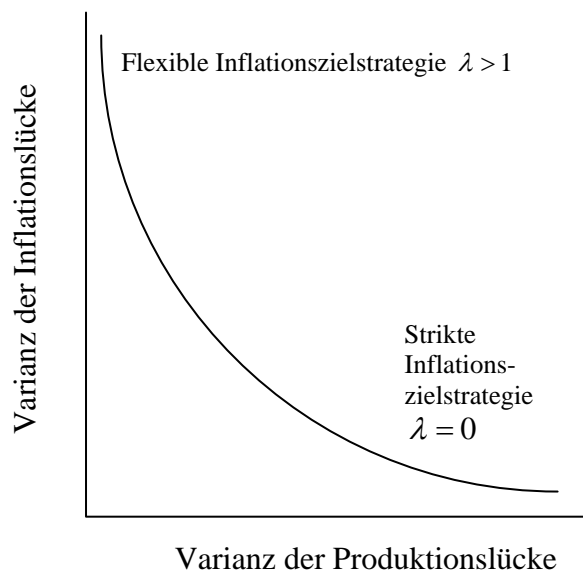
To represent this process, economists frequently use the welfare function (or loss function L_t) for monetary policy shown in equation 1; this function is derived from an intertemporal function and is shown below for period t :

$$(1) \quad L_t = (1 - \lambda)(\pi_t - \bar{\pi})^2 + \lambda(y_t - \bar{y})^2$$

This equation shows that in theory, central banks can influence both the deviation of the inflation rate π_t from the target rate for inflation $\bar{\pi}$ and the deviation of the output level y_t from the potential output level \bar{y} . The parameter λ determines whether the central bank should focus on stabilizing the business cycle or on stabilizing inflation, as attainment of both objectives simultaneously is not always possible.

Achievement of the objectives depends on whether an economy is primarily subject to demand shocks or to supply shocks. Demand shocks, for example, move output and prices in the same direction. Thus central banks that have the objective of stabilizing only inflation also stabilize the business cycle, if, for instance, they react to a low inflationary forecast by cutting interest rates and the low inflation reflects cyclical weakness. Hence the estimated reaction functions indicate that central banks also take into account cyclical developments even in countries which pursue a strict inflation target. However, in such cases, central banks do not take a discretionary decision to stabilize the business cycle; rather, cyclical stabilization is a side effect of inflation targeting, because the output gap provides information relevant to price developments.

Supply shocks, however, may cause cyclical stabilization and inflation stabilization objectives to conflict because they move prices and output in opposite directions. The weighting parameter λ determines whether the central bank should stabilize inflation at the target level and incur costs in the form of unemployment or whether it should remain accommodative and tolerate the rise in inflation in order to stabilize output. Chart 1 demonstrates the tradeoff between inflation stabilization and cyclical stabilization.



Flexible inflation targeting $\lambda > 1$

Flexible inflation targeting $\lambda = 0$

Variance of the inflation gap

Variance of the inflation gap

Chart 1: The Tradeoff between Inflation Stabilization and Cyclical Stabilization

The curve in chart 1 shows the combination of the variance of inflation and of output which can be achieved by appropriate interest rate management. The different points on the curve result from the change in the relative weight in the loss function.

However, the economic literature frequently cautions that discretionary monetary policymaking may easily be abused to generate short-term growth via low interest rates, which ultimately only raises long-term inflation, an issue labeled inflation bias. Such stabilization policy could damage the credibility of central banks' long-term maintenance of low inflation. This assessment draws on the literature on dynamic time inconsistency (Kydland and Prescott, 1977). Barro and Gordon (1983), who justified the need for a conservative central bank with a higher inflation aversion than the median voter, also decisively influenced economic thinking about credibility. Dynamic time inconsistency arises

when policymakers opportunistically resort to low interest rates prior to elections to raise short-term growth and employment. Ultimately, this means that a central bank maximizes a welfare function that minimizes the deviation of the output level from a production level target in excess of potential output rather than minimizing the output gap (see equation 1). Rational economic agents realize that policymakers have given in to misguided incentives and adjust their nominal wages upward. The result is a higher rate of inflation, as the output level cannot be raised above potential output and as the Phillips curve is assumed to be vertical in the long run.

The Treaty assigns overriding importance to the Eurosystem's objective of maintaining price stability for good economic reasons. Since monetary policy can ultimately only influence the price level in the economy, price stability is its natural objective. Assigning monetary policy an objective for real income or employment would have been problematic since, apart from the positive impact of price stability, monetary policy has no scope for exerting any lasting influence on real variables. It is the task of other economic actors, notably those responsible for fiscal and structural policies, to enhance the growth potential of the economy. The clear hierarchy of objectives that the Treaty establishes for the Eurosystem reflects decades of practical experience and a large number of economic studies which suggest that monetary policy will contribute most to improving economic prospects and raising the living standards of citizens by maintaining price stability in a lasting way.