

## THE EURO, INTEREST RATES AND EUROPEAN ECONOMIC GROWTH

In the euro area, long-term interest rates have converged considerably since mid-1995. In May 1995 the interest rate gap between Italy and Germany was 6.3 percentage points; between Spain and Germany the gap was a good 5 percentage points in April of the same year. Today the maximum difference (Portugal) is no more than 0.4 percentage points. Even for Greece, which will join the euro-area on 1 January 2001, the interest rate gap to Germany has been reduced from 6 percentage points in March 1998 to 0.8 percentage points. During this entire period, the interest rates in the Netherlands and Austria have been practically identical to those in Germany.

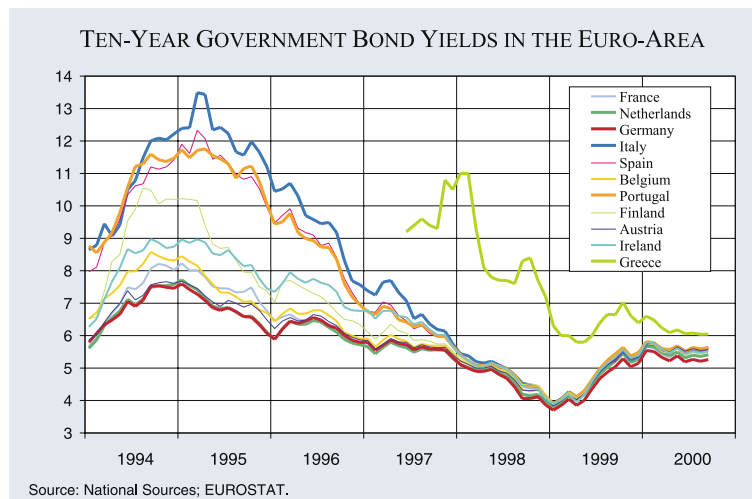
Even though long-term interest rates have risen by about 1.5 percentage points since January 1999, most of the eleven euro countries are currently enjoying unusually low rates since the risk premia that international investors demanded have disappeared. As a result, real investment demand is expected to revive. Without doubt, the countries that have been liberated from the risk premia will enjoy dynamic economic growth in coming years.

The growth of investment demand will probably drive interest rates higher than had been customary in Germany, Holland and Austria. In this respect, these countries could face more difficult years ahead.

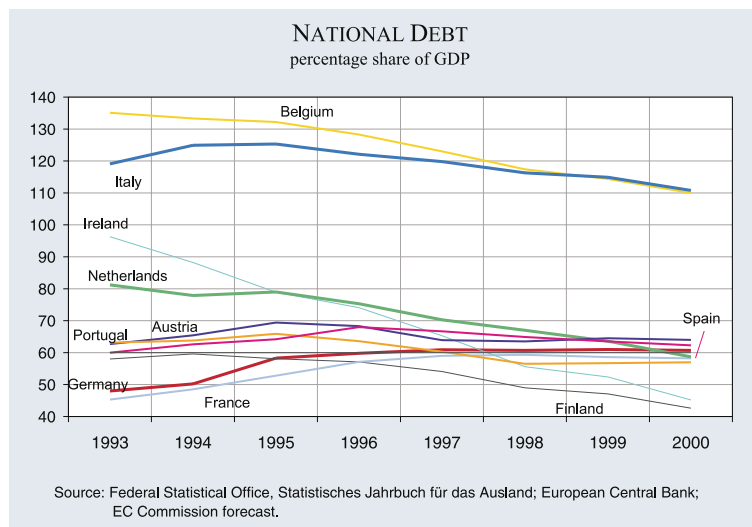
It is often maintained that the convergence of long-term interest rates is primarily attributable to the budget consolidation in countries with poor budgetary performance in the past. Figure 2 shows that the facts do not substantiate this interpretation. Countries like France and Finland, which have always met the EU debt criteria, or countries like Spain and Portugal, that have only fallen slightly short, experienced the same convergence of interest rates as Italy and Belgium which – despite considerable consolidation – still have very high debt levels. Evidently the general interest-rate convergence in the years up to 1998 was independent of the debt levels of the countries involved. The reduction of risk premia had very little to do with the growing solidity of national budgetary policies.

The real explanation of the decline in risk premia lies in the constant reduction of the exchange rate risks as the deadline for the final establishment of currency parities approached. Today the exchange rate risk has disappeared entirely, and only the country-specific bankruptcy risks remain. Investors do not seem to regard these

**Figure 1**



**Figure 2**



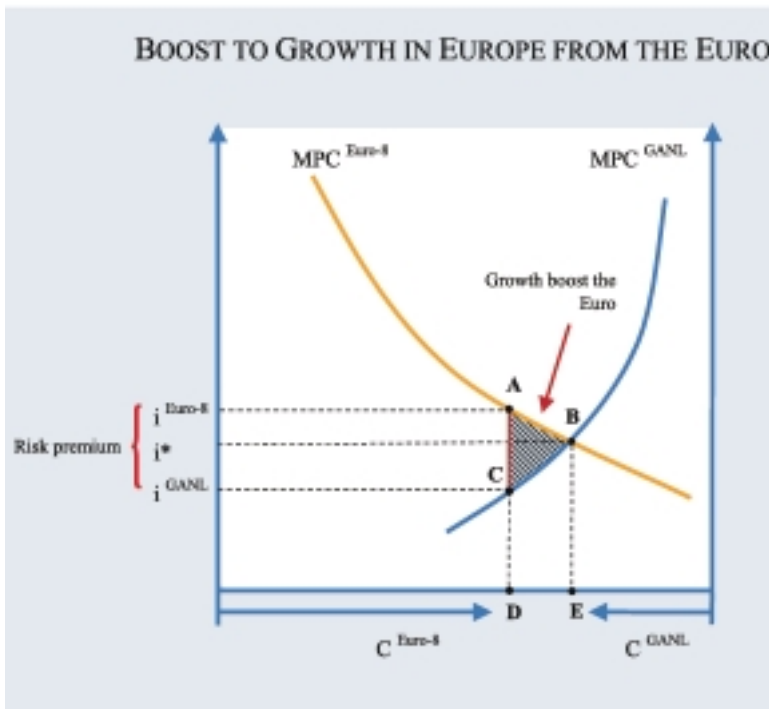
risks as particularly serious, however, as the closely converged interest rates show.

For the European economy, the interest rate convergence will bring a considerable boost to growth because available savings will now no longer be prevented by uncertain exchange rates from flowing into the most profitable uses. Growth in European productive capacity, which results from a given investment volume, will reach its maximum extent when the marginal return of real capital of different countries is brought into equilibrium, and precisely this can be expected, apart from the distorting influence of national taxation systems, when the terms of financing are the same everywhere. The following figure illustrates this argument.

The diagram, which is based on alternative scenarios that pertain to Europe in 2010, shows the distribution of a given amount of investment capital to the previous low interest-rate group consisting of Germany, the Netherlands and Austria, as well as the other eight euro countries that formerly had to pay

risk premia. The capital demand of these eight euro countries is measured from left to right, the capital demand of the three other countries from right to left. The associated curves mark the corresponding values of the marginal productivity of capital and, because firms invest to the point at which the marginal productivity corresponds to the interest rate, also the demand curve for capital. Without the introduction of the euro, the risk premia would have remained, and a capital market equilibrium would have arisen to the left of the intersection point of the marginal productivity curves at which the interest rates of the countries would have differed by the risk premium AC. With the introduction of the euro, the risk premium disappears, however, and the interest rates converge at the level of  $i^*$ , which implies an increase in the German, Dutch and Austrian interest rates and a decline of the rates of the eight other euro countries. To the extent of DE, capital that otherwise would have been invested in Germany, Holland and Austria is diverted to the other countries. GDP in these countries is therefore higher by the area ABED, and GDP in Germany, Holland and Austria is lower by the area CBED than would have been the case without the euro. On balance, therefore, the introduction of the euro increases total European GDP by the triangle ABC.<sup>1</sup> This explains the boost to growth in Europe as a whole.

Figure 3



- $MPC_{GANL}$  Marginal productivity of capital in Germany, Austria and the Netherlands
- $MPC_{Euro-8}$  Marginal productivity of capital in the other eight euro countries
- $i_{GANL}$  Interest rates in Germany, Austria and the Netherlands if the euro hadn't been introduced
- $i_{Euro-8}$  Interest rates in the other euro countries if the euro hadn't been introduced
- $i^*$  Uniform interest rate in all euro countries after the introduction of the euro

Austria is lower by the area CBED than would have been the case without the euro. On balance, therefore, the introduction of the euro increases total European GDP by the triangle ABC.<sup>1</sup> This explains the boost to growth in Europe as a whole. The fact that Germany, Holland and Austria have lost the financing privileges that they enjoyed as a result of the D-Mark or exchange rates fixed to the D-Mark may be regrettable, but it is the reason for the expected surge in growth in Europe as a whole.

Hans-Werner Sinn/Robert Koll

<sup>1</sup> As the Balassa Effect implies higher national inflation rates in most of the countries that previously had to pay higher interest rates, it can also be argued that the low real interest rates in these countries are the reason for the high capital demand. This is the same argument though, since, when relative prices change, a welfare optimum is defined by the international equality of the overall rates of return to capital where these rates are defined as the sums of the marginal value products and the rates of national price increase. If the national rates of price increase differ, the curves denoted MPC must be interpreted in terms of these overall rates of return.