Box

ECB STAFF MACROECONOMIC PROJECTIONS FOR THE EURO AREA

On the basis of the information available up to 23 February 2007, ECB staff have prepared projections for macroeconomic developments in the euro area.[1] Average annual real GDP growth is projected to be between 2.1% and 2.9% in 2007 and between 1.9% and 2.9% in 2008. The average rate of increase in the overall Harmonised Index of Consumer Prices (HICP) is projected to be between 1.5% and 2.1% in 2007 and between 1.4% and 2.6% in 2008.

Technical assumptions about interest rates, exchange rates, oil prices and fiscal policies

The technical assumptions about interest rates and both oil and non-energy commodity prices are based on market expectations, with a cut-off date of 13 February 2007. With regard to short-term interest rates as measured by the three-month EURIBOR, market expectations are measured by forward rates, reflecting a snapshot of the yield curve at the cut-off date.[2] This implies an increase from the mid-February level of 3.8% to averages of 4.2% in 2007 and 4.3% in 2008. The market expectations for euro area ten-year nominal government bond yields imply a flat profile around the mid-February level of 4.1%, with an average of 4.2% in 2007 and 2008. On the basis of the path implied by futures markets in the two-week period ending on the cut-off date, annual average oil prices are assumed to be USD 59.9 per barrel in 2007 and USD 63.4 per barrel in 2008. The average annual increase in non-energy commodity prices in US dollars is assumed to be 14.5% in 2007 and 5.0% in 2008.

The technical assumption is made that bilateral exchange rates remain unchanged over the projection horizon at the average levels prevailing in the two-week period ending on the cut-off date. This implies a EUR/USD exchange rate of 1.30 and an effective exchange rate of the euro that is 1.7% higher than the average for 2006.

Fiscal policy assumptions are based on national budget plans in the individual euro area countries. They include all policy measures that have already been approved by parliament or that have been specified in detail and are very likely to pass the legislative process.

Assumptions with regard to the international environment

The external environment of the euro area is expected to remain favourable over the projection horizon. While real GDP growth in the United States is projected to be somewhat lower than in recent years, real GDP growth in emerging Asia is expected to remain well above the global average, and growth in most other large economies is also projected to remain dynamic.

Overall, annual growth in world real GDP outside the euro area is projected to average about 5.1% in 2007 and 5.0% in 2008. Growth in the euro area’s external export markets is projected to be about 5.5% in 2007 and 6.9% in 2008.

1 The ECB staff macroeconomic projections complement the Eurosystem staff macroeconomic projections that are produced jointly by experts from the ECB and the euro area NCBs on a biannual basis. The techniques used are consistent with those of the Eurosystem staff projections as described in “A guide to Eurosystem staff macroeconomic projection exercises”, ECB, June 2001. To reflect the uncertainty surrounding the projections, ranges are used to present the results for each variable. The ranges are based on the differences between actual outcomes and previous projections carried out over a number of years. The width of the ranges is twice the average absolute value of these differences.

2 This box includes a methodological note on the possible differences between the market-based short-term interest rate assumptions used in the projection exercises and EURIBOR futures rates.

Real GDP growth projections

Following the exceptionally high growth in euro area real GDP in 2006, with Eurostat's first estimate for the fourth quarter of the year indicating a quarter-on-quarter growth rate of 0.9%, GDP is projected to expand over the horizon at quarterly growth rates of around 0.6%. Against this background, it is projected that average annual real GDP growth will be between 2.1% and 2.9% in 2007 and between 1.9% and 2.9% in 2008. Among the driving factors, export growth is expected to continue to support economic activity, despite some competitiveness losses, as foreign demand is assumed to continue to grow at a robust pace. Private consumption is projected to increase broadly in line with real disposable income, which is expected to benefit in particular from improvements in the labour market. Total fixed investment growth is projected to continue at a robust pace, in a context of continued favourable financing conditions, high profits and favourable demand prospects.

Table A Macroeconomic projections for the euro area

(average annual percentage changes)[1), 2)]

	2006	2007	2008
HICP	2.2	1.5-2.1	1.4-2.6
Real GDP	2.8	2.1-2.9	1.9-2.9
Private consumption	2.0	1.8-2.4	1.6-3.0
Government consumption	2.3	0.8-1.8	1.0-2.0
Gross fixed capital formation	4.9	2.4-5.0	1.9-5.1
Exports (goods and services)	8.3	4.7-7.7	4.1-7.3
Imports (goods and services)	7.9	3.7-7.1	4.2-7.6

1) For each variable and horizon, the range is based on the average absolute difference between actual outcomes and previous projections by euro area central banks. The projections for real GDP and its components refer to working-day-adjusted data. The projections for exports and imports include intra-euro area trade.
2) Slovenia is included in the euro area projections as of 2007. The annual percentage changes for 2007 are based on a euro area composition that includes Slovenia already in 2006. The weight of Slovenia in euro area GDP is approximately 0.3%.

Price and cost projections

The average rate of increase in the overall HICP is projected to be between 1.5% and 2.1% in 2007 and between 1.4% and 2.6% in 2008. In line with the oil price assumptions, as derived from current oil futures prices, the contribution from increasing energy and non-oil commodity prices to consumer price developments is expected to be relatively minor. At the same time, the projections are based on the expectation that wage growth will increase somewhat over the projection period. As labour productivity growth is projected to remain roughly stable, this implies a projection of increasing unit labour cost growth over the horizon. A major factor affecting HICP inflation in 2007 is higher indirect taxes (with an aggregate euro area contribution of 0.5 percentage point to HICP inflation). For 2008, by contrast, no effects from indirect taxes are currently embedded in the projections. Finally, the HICP projections are based on expectations of still steady, albeit slightly declining, growth in profit margins

Comparison with the December 2006 projections

Compared with the Eurosystem staff macroeconomic projections published in the December 2006 issue of the Monthly Bulletin, the ranges projected for real GDP growth in 2007 and 2008 have been adjusted slightly upwards, reflecting mostly the positive outcome for GDP in the second half of 2006 and lower energy prices than previously assumed.

The new range projected for the annual rate of increase in the overall HICP in 2007 is within the lower part of the range of the December 2006 projections, reflecting mainly the assumption of lower energy prices. The range for 2008 has been shifted upwards, reflecting the assumption of slightly stronger wage pressures than in the December 2006 exercise.

Table B Comparison with the December 2006 projections

(average annual percentage changes)

	2006	2007	2008
Real GDP – December 2006	2.5-2.9	1.7-2.7	1.8-2.8
Real GDP – March 2007	2.8	2.1-2.9	1.9-2.9
HICP – December 2006	2.1-2.3	1.5-2.5	1.3-2.5
HICP – March 2007	2.2	1.5-2.1	1.4-2.6

Methodological note on the short-term interest rate assumptions used in the projection exercises

The market-based short-term interest rate assumptions used in the Eurosystem/ECB staff macroeconomic projection exercises are three-month forward rates computed from a zero-coupon yield curve estimated using the Nelson-Siegel-Svensson method, a method commonly employed by central banks to estimate yield curves.[3]

These interest rate assumptions can therefore diverge somewhat from EURIBOR futures rates, which market participants often use as indicators of future short-term interest rates. The ECB chose to use forward rates because EURIBOR futures contracts are liquid only up to the three-year horizon, and for some model simulations the full path of short-term interest rates up to the ten-year horizon is needed. Additionally, a consistent calculation of short-term and long-term interest rate assumptions in the projection exercises requires the whole yield curve up to ten-year maturity.

Differences between the forward and futures rates are mainly due to different quoting conventions for EURIBOR futures rates and Reuters zero coupon swap rates, which are used as input for fitting a euro area swap curve using the Nelson-Siegel-Svensson method. Differences relate notably to compounding conventions and day count conventions.

As regards compounding conventions, interest rates which refer to a period of less than a year, for example three-month forward rates, are usually expressed in per annum terms and thus need to be annualised. The forward rates used by ECB staff are computed as compounded rates, which means that they take “interest on interest” into account. By contrast, EURIBOR rates are quoted as simple rates. Simple rates are lower (at about 5 basis points at the current level of interest rates) than comparable compounded rates.

Another relevant interest rate convention is related to the assumed length of a year. Zero coupon swap rates provided by Reuters are quoted as actual/actual. This means that a given period is annualised by assuming a year has 365 days (or 366 days in leap years). EURIBOR rates, by contrast, are quoted as actual/360. They are therefore slightly lower (about 6 basis points at present) than comparable zero coupon rates.

Overall, the difference in quoting conventions causes the interest rate assumptions used for the projections to be some 10 basis points higher than EURIBOR futures rates at present. In this context, it is important to stress again that these interest rate assumptions are computed mechanically from the yield curve and do not contain any judgemental factors.

[3] See “Zero-coupon yield curves: technical documentation”, BIS Papers No 25, Bank for International Settlements, 2005.

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