

Box 2

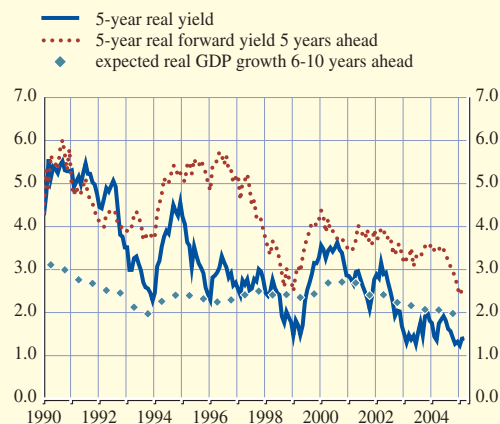
RECENT DEVELOPMENTS IN LONG-TERM REAL INTEREST RATES

Long-term real interest rates in the euro area and the United States underwent a strong decline from mid-2004 until mid-February 2005. The fall affected in particular long-term forward real interest rates, which reached very low levels by historical standards, whereas shorter-term spot rates declined less in the euro area and even increased in the United States. Despite the recent rebound, long-term spot as well as forward rates remain at low levels compared with growth expectations as extracted from survey measures. This box assesses the factors which may have been behind these recent developments in long-term real interest rates.

Charts A and B plot five-year real spot bond yields and five-year real (implied) forward bond yields five years ahead in the euro area and the United States over the past 14 years.¹ Since mid-2004, the real forward yield has declined far more strongly than the five-year real spot yield. This is notable as, on average, shorter-term spot rates tend to fluctuate more than forward rates. Indeed, both in the euro area and the United States, the five-year real forward rates five years ahead remained rather stable over the previous few years despite some sharper movements in the five-year real spot rate.

Chart A Five-year spot and forward real yields and real GDP growth expectations six to ten years ahead for the euro area

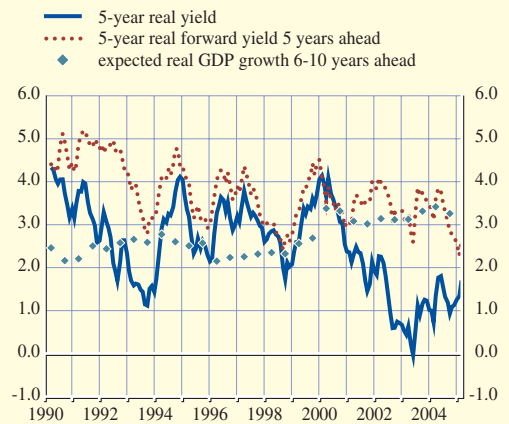
(percentages per annum; monthly data)



Sources: Consensus Economics, Deutsche Bundesbank and ECB calculations.

Chart B Five-year spot and forward real yields and real GDP growth expectations six to ten years ahead for the United States

(percentages per annum; monthly data)



Sources: Consensus Economics, BIS and ECB calculations.

¹ Five-year real spot bond yields and five-year real (implied) forward bond yields five years ahead are derived by respectively discounting five-year zero coupon government bond yields and five-year forward zero coupon government bond yields five years ahead with inflation expectations for comparable periods from Consensus Economics.

The explanations for the decline in long-term forward rates which have been put forward recently can be grouped into three broad categories. Firstly, there is the macroeconomic view which stresses the importance of long-term fundamental factors in interest rate determination. Secondly, it has been argued that structural factors have boosted the demand for bonds and thereby may have eroded the risk premium on bonds, especially those of longer maturities. Finally, speculative positioning may have exacerbated the decline in long-term bond yields, while ample liquidity in the global economy after extended periods of accommodative monetary policy has also been mentioned as a possible factor facilitating the decline in yields.

Regarding macroeconomic fundamental factors, concerns among market participants about the long-term growth prospects in the major economies seem to have played a fairly minor role in explaining recent bond market developments. Despite market disappointment over fourth quarter real GDP growth figures in some euro area countries and a number of weaker than expected data releases, long-term growth prospects six to ten years ahead as measured by Consensus Economics, for example, have not significantly weakened in the euro area (see Chart A). In the United States, economic growth prospects appear to have been perceived as robust by market participants and policy rates have at the same time been raised. Therefore, developments in long-term growth expectations do not appear to justify the decline in real bond yields in the United States and the euro area.

This implies that other factors, which primarily relate to changes in risk premia, are behind recent bond market developments. Structural changes, which generally appear to have increased the demand for longer-term bonds, may have led to an overall lower risk premium demanded on bonds. In the euro area, pension funds in particular appear to have increased their holdings of long-term securities. This is illustrated in Chart C, which shows the one-year net cumulative purchases of longer-term securities and quoted shares by pension funds and insurance corporations in the euro area.² Purchases of long-term bonds by pension funds and insurance corporations have increased in the period following the bursting of the so-called IT bubble in early 2000. At the same time, their purchases of equities have slowed down significantly. While flow-of-funds data on purchases of long-term securities (i.e. with a maturity over one year) by pension funds and insurance corporations are only available up to the third quarter of 2004, anecdotal evidence suggests a continuation of the trend of increased purchases of long-term securities.

A number of changes in the regulatory environment for pension funds and life insurance corporations appear to be under way in the euro area and the United States, which aim to reduce the problems of mismatches between the duration of their assets and liabilities. It is generally perceived that these regulatory changes will favour the purchase of bonds over other asset classes by pension funds and life insurance corporations. As a result of these changes and anticipatory effects of the proposed legislation, there may have been an increase in the structural demand for bonds of longer maturities from pension funds and life insurance corporations.

At the same time, pension savings have increased, at least in the euro area, and are likely to continue to do so – especially in the light of the demographic challenges, such as ageing

² The flow-of-funds data also include non-life insurance corporations. However, the distortion in overall trends from this specific sector is expected to be of a relatively small magnitude.

populations in most developed economies. This may have led to lower risk premia on long-term bonds.

In addition, in the United States, the massive purchases of government bonds by Asian central banks probably had a significant impact on long-term bond yields.³ There is, however, some indication that this factor played a less prominent role in most recent bond yield developments because the demand for US Treasuries from foreign official and institutional investors has levelled off in early 2005, as indicated by data published by the Federal Reserve.

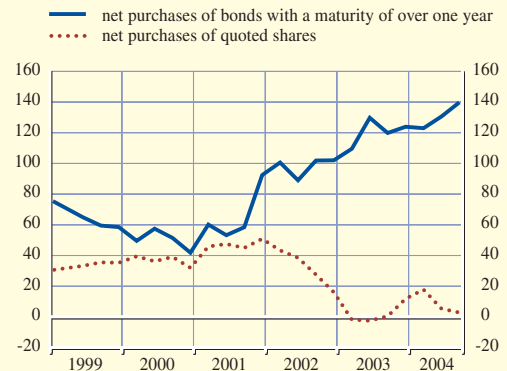
While some of these more structural factors point to a possible permanent change in long-term real interest rates, the speed of the decline in long-term yields which occurred from mid-2004 may suggest that other temporary market factors related to speculative behaviour may also have played a role. The alleged widespread use of so-called carry trades, which generate interest income as they involve borrowing at low short-term interest rates and investing in longer-term instruments, may have amplified the trend of declining yields set in motion by more structural factors. As such trades appear to exploit market trends, they may have amplified the downturn in long-term interest rates. Speculative flows of this sort are likely to be reversed at some point and hence should not have a permanent effect on the level of long-term interest rates.

It cannot be excluded that the low risk premium embedded in long-term bonds may also be linked to the abundant liquidity in the global financial system after extended periods of monetary policy accommodation. However, it should be noted that although the view of ample liquidity giving rise to asset price inflation may appear intuitively plausible, it is very hard to support empirically.

All in all, the recent decline in long-term real interest rates is unlikely to reflect significant changes in the growth expectations of market participants, but seems to relate more to declines in risk premia demanded on long-term bonds stemming from structural and temporary factors. This development warrants continued attention and a thorough analysis of the determinants of financial asset prices.

Chart C One-year net cumulative purchases of long-term bonds and equities by insurance corporations and pension funds in the euro area

(EUR billions; quarterly data)



Source: ECB.

³ See B. S. Bernanke, V. R. Reinhart and B. P. Sack, "Monetary policy alternatives at the zero bound: an empirical assessment", Finance and Economics Discussion Series of the Federal Reserve Board, September 2004.