

Box 1

DEVELOPMENTS IN US BOND YIELDS AND STOCK PRICES AFTER PEAKS IN THE FEDERAL FUNDS TARGET RATE

On 29 June 2006 the Federal Open Market Committee (FOMC) raised the federal funds target rate by 25 basis points for the 17th consecutive time, to 5.25%. Subsequently, monetary policy expectations were reassessed: market participants anticipated that the likelihood of any further increase in short-term interest rates had decreased and that the federal funds target rate would begin to decline in early 2007. Reflecting this, following the FOMC meeting in June, US long-term bond yields declined and stock prices increased. To put these developments into a historical perspective, this box compares the recent reactions of US long-term interest rates and stock

prices with market patterns that unfolded after previous peaks in monetary policy tightening cycles in the period from the late 1980s onwards.

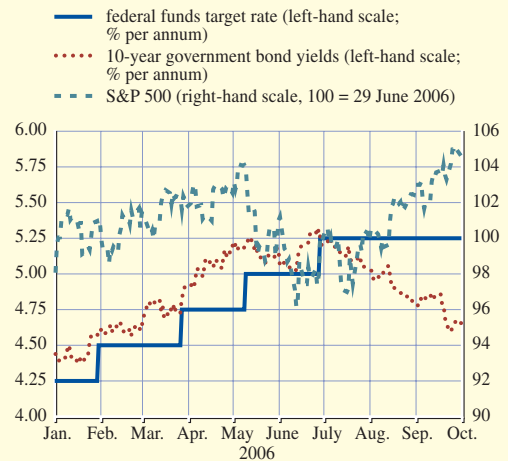
Changes in monetary policy expectations can feed into long-term bond yields and stock prices through their impact on the discount factor in the respective theoretical pricing formulas. In this regard, the expectations hypothesis states that the yield offered on a long-term bond is made up of the average of current and expected future short-term rates. Similarly, the dividend discount model suggests that the price of a stock is equal to the sum of the expected future dividends, discounted by a risk-free interest rate and the risk premium investors require for holding the share. Consequently, and all other things being equal (in particular earnings expectations), downward revisions in future expected short-term interest rates would exert downward pressure on long-term bond yields and have a positive impact on stock prices.

Chart A shows the developments in the federal funds target rate, the US ten-year government bond yield and the Standard & Poor's 500 index in 2006. It shows that, since the last decision to raise the federal funds target rate at end-June to its perceived peak level, long-term interest rates declined by 60 basis points and stock prices increased by around 5%. According to the theoretical arguments presented above, it may well be the case that these developments are closely linked to changing monetary policy expectations. In this context, it is interesting to compare the current asset price reactions with those occurring around previous peaks in tightening cycles by the Federal Reserve. During the last two and a half decades, three peaks in the federal funds target rate can be observed – in February 1989, in February 1995 and in May 2000. Charts B and C show the performance of US bond yields and stock prices in the four quarters following these peaks.

Two interesting features can be noted from the charts. First, US long-term bond yields have generally followed a downward trend after the federal fund target rate peaks. In particular, a marked decline in long-term bond yields was noticeable in the first two quarters following the peak in the federal funds target rate in all three episodes. Second, on two out of three occasions, the Standard & Poor's 500 index rose after the peak in short-term interest rates. However, on the third occasion, i.e. in the period following the May 2000 peak in policy rates, stock prices declined. The main factors behind this decline were probably, on the one hand, heavy downward revisions to earnings expectations, particularly for firms belonging to the “new economy”, as best epitomised by internet firms, and, on the other, a much reduced risk appetite on the part of investors. Thus, the asset price reactions between end-June and early October this year have so far to a large extent mirrored those occurring after previous peaks in the federal funds target rate.

Chart A Federal funds target rate, US bond yields and stock prices

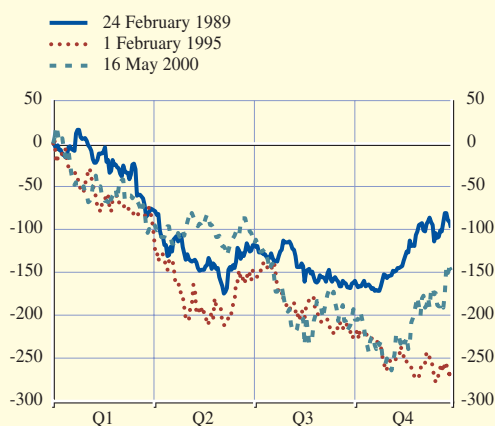
(daily data)



Source: Reuters.

Chart B Changes in US ten-year bond yields after a peak in the US tightening cycle

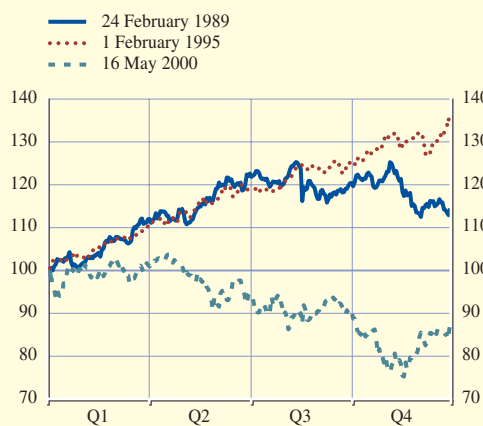
(basis points; daily data)



Source: Reuters.
 Note: The peaks refer to 24 February 1989, 1 February 1995 and 16 May 2000.

Chart C Changes in the S&P 500 index after a peak in the US tightening cycle

(index points; daily data)



Source: Reuters.
 Note: The peaks refer to 24 February 1989, 1 February 1995 and 16 May 2000. Index rebased to 100 on each peak day.

This notwithstanding, any comparison between asset price reactions over time should be treated with caution and not be interpreted in a mechanical way. Importantly, such a comparison implicitly assumes that all other potential factors driving bond yields and stock prices do not dominate the impact of changing monetary policy expectations over the periods concerned. In this respect, it should be borne in mind that long-term nominal and real interest rates in most major markets are still at relatively low levels, both in absolute terms and relative to macroeconomic fundamentals. Unusually low risk premia have in all likelihood had a dampening effect on bond yields, partly reflecting still ample liquidity conditions and a stronger general demand for long-term fixed-income instruments from institutional investors, oil-exporting countries and other foreign investors.¹ Looking ahead, it cannot be excluded that future bond yield developments may be influenced by a normalisation of bond market risk premia, which would work against the typical reaction pattern described above.

¹ See the box entitled “Recent developments in long-term real interest rates” in the April 2005 issue of the Monthly Bulletin.