

Box 8

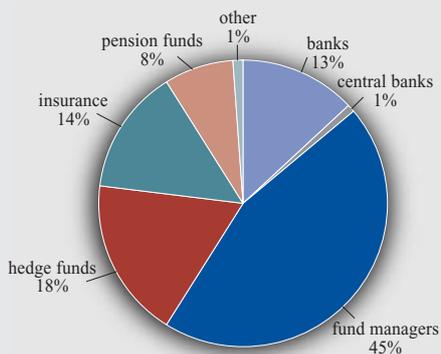
THE EXTENSION OF THE EURO YIELD CURVE TO ULTRA-LONG MATURITIES

By expanding the range of securities available to agents for facilitating investment and the hedging of financial risks, financial innovation can – through better tailoring of risk-return trade-offs to individual wants and needs – contribute to enhancing the stability of the financial system. At the end of February 2005, the French Treasury issued the first euro-denominated 50-year government bond. The 4% Obligations Assimilables du Trésor (OAT) bond maturing in 2055 is the longest-maturity bond on the euro yield curve. Investor demand has been very high: while the issuance amount was EUR 6 billion, the order book reached a total volume of EUR 19.5 billion and the yield at issuance was 4.21%, just 3 basis points above the comparable 30-year bond at that time. Moreover, demand was widespread among different investor groups and by geographical distribution (see Charts B8.1 and B8.2). This Box examines some of the factors that motivated the launch of, and high demand for, this new OAT bond, an innovation which marks the creation of a new segment on the euro yield curve and represents a further step in the development of the euro fixed income market.

From an issuer perspective, an important factor that appeared to have motivated the timing of the launching of the French 50-year bond was the very low level of long-term interest rates, allowing the locking in of very low debt servicing costs for very long maturities, a factor that appears to be giving rise to similar considerations in many other European countries. While long-term interest rates have reached very low levels, the strength of investor demand for a very long-dated fixed income security appears to be mainly structural; primarily reflecting expected demographic trends and balance sheet mismatches among some institutional investors.

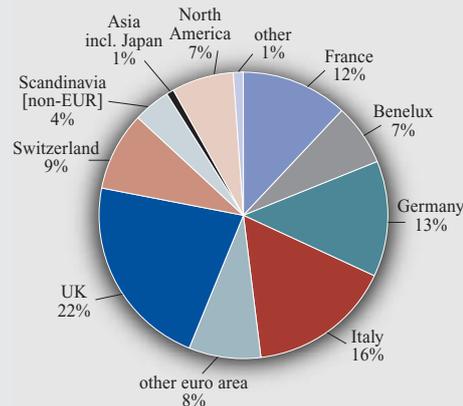
Concerning demographic trends, the ageing of populations in many mature economies is expected to increase the need for long-dated investments. This is because the combination of a greater number of pensioners and longer life expectancy raises the demand for retirement savings, either intermediated through pension funds or life insurance products, or through direct investment by individual investors. As planning for retirement typically involves lengthy investment horizons, long-maturity bonds can provide a natural investment vehicle for funding pensions.

Chart B8.1 Distribution by investor group



Source: Agence France Trésor.

Chart B8.2 Geographical distribution of investors



Source: Agence France Trésor.

Concerning balance sheet mismatches, some institutional investors such as life insurers and pension funds have so-called duration (or interest rate sensitivity) mismatches between their assets and liabilities,¹ as the maturities of liabilities are often longer than those of assets (see Box 16 in the December 2004 FSR). This exposes the balance sheets of these institutions to interest rate risk. In some countries (e.g. Denmark, the Netherlands and the UK), regulatory changes have taken place that will involve simultaneous market valuation of assets and fair valuation of liabilities, while the implementation of International Accounting Standard (IAS) 19 will expose these mismatches across Europe. As a result, there has been growing demand from institutional investors for fixed income instruments. Moreover, a survey conducted by the French Treasury in advance of the launch of the 50-year bond found that the equity investments of pension funds and insurance companies were at relatively high levels.² Based on an hypothetical assumption that European pension funds, which hold almost EUR 1 trillion in equities, were to shift a quarter of these assets into long-dated bonds, the French Treasury foresees a potential demand for these products of over EUR 200 billion over the medium term.

Another feature of fixed income bonds with very long maturities is their convexity profile, which makes them attractive to speculative investors such as hedge funds.³ If two bonds offer the same duration and yield, but one exhibits greater convexity, then changes in interest rates will affect their values differently. A bond with greater convexity will be less affected by changes in interest rates than one with less convexity. This means that bonds with greater convexity will have higher prices than comparable bonds with less convexity. Although a 50-year bond has a longer duration than a 30-year bond, the rise in duration when moving from a 30-year to a 50-year maturity is significantly smaller than the increase in convexity. As bonds with greater convexity outperform bonds with less convexity regardless of the direction of

1 Duration is a yardstick of the sensitivity of a bond's value to a change in interest rates.

2 For a summary of the survey results, see Agence France Trésor's press release of 18 February 2005.

3 The relationship between a bond's value and the level of interest rates is typically not proportional, and convexity measures this aspect of the price-yield relationship. Used in conjunction with duration, this enables a more refined estimate of bond price sensitivity to changes in interest rates.

changes in interest rates, this feature can make 50-year bonds very attractive on a relative basis. According to the French Treasury, the convexity of the 50-year bond is around 80% higher than that of the comparable 30-year bond, whereas its duration is only around 35% greater. In an environment of relatively low bond market volatility with the potential for an increase over the medium term, this may have been an additional factor explaining the high level of demand for this security among hedge funds.

Overall, the launching of the French 50-year bond represents a further step in the broadening of capital markets in the euro area. By satisfying investor demand, predicated on the better management of interest rate risk, the availability of this security should contribute to enhancing the stability of the financial system.