

Box 16 Solvency and balance sheet restructuring in the euro area life insurance sector

Persistently low interest rates have left the life insurance sector with significant balance sheet vulnerabilities. In the past, when interest rates were higher than those prevailing towards the end of the 1990s and early 2000s, life insurance companies in the euro area sold savings products to households with guaranteed returns. Given the long-term nature of these policies and that they had fixed returns, strains on profits began to emerge. This was because the yields earned on the asset side became lower than the offered minimum guaranteed returns on the policies they had sold. The continuous declines in interest rate also raised the duration – or interest rate sensitivity – of life insurers' liabilities. In other words, their balance sheets were left increasingly exposed to interest rate risk, as any change in long-term interest rates translated into a change in the net present value of their liability, just as bond prices are affected by interest rate changes. Against this background, this Box examines the ways in which the life insurance industry has attempted to tackle its balance sheet mismatches.

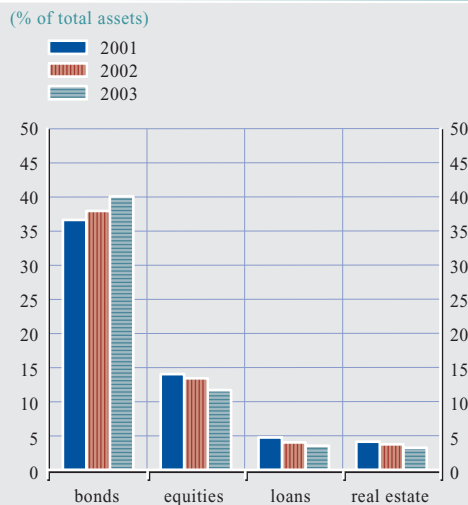
In order to lessen the interest rate risk for the net worth of life insurers, the assets backing the liabilities should ideally be chosen so that they broadly match the duration and convexity of the liability.¹ In the euro area, there are few bonds available with maturities beyond ten years, so that eliminating balance sheet interest rate sensitivities proved challenging. Hence, life insurers turned to equities both for long-term hedges of their liabilities and to increase the yields on

¹ The modified duration is a yardstick of the sensitivity of a bond portfolio's value to a small change in interest rates. This relationship is typically not proportional and convexity measures this aspect of the price-yield relationship. Used in conjunction with duration, a more refined estimate of bond price sensitivity to changes in interest rates is possible.

their investment portfolios. They also reacted to their growing balance sheet mismatches by seeking higher returns in the credit derivative market. As a result, the portfolio of euro area life insurance companies became more risky. Then, when equity markets began to tumble from 2000 onwards, the losses on equity holdings strained the solvency of life insurers and reserves were eroded (e.g. hidden, free premium refund and policyholders' free reserves). To avoid a solvency crisis and also in response to pressures from rating agencies, significant distressed selling of equities by life insurers took place in 2001.

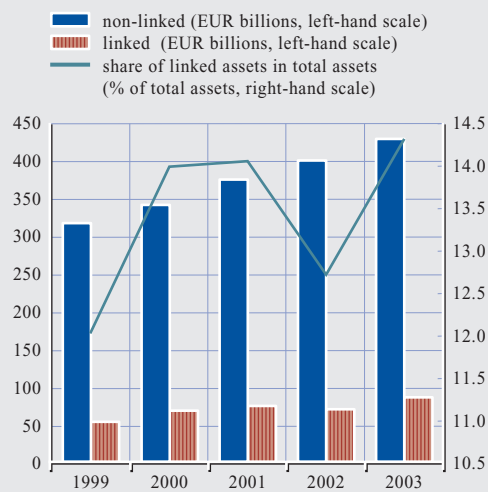
Risk rebalancing was evident in the life insurance industry throughout 2002 and 2003, the aim of which was to reduce investment risk, the most important risk for life insurers, so that capital bases could meet regulatory capital adequacy ratios. The main way in which this occurred was through an increase in the share of bonds in total assets and through a cutting back of the proportion of equities (see Chart B16.1). There were also indications that life insurers had retreated from the credit derivatives markets. However, duration gaps still remained negative, so that low interest rate levels continued to pose challenges for life insurance firms. Insurance companies also attempted to lessen their balance sheet risks in 2003 by transferring investment risks to the household sector. By reducing the guaranteed returns on traditional policies, insurers have sought to encourage households to invest in linked products, whose yield is typically indexed on stock indexes and whose risk is not borne by the life insurer (see Chart B16.2). They had some success with this in 2003, although the share of linked assets only recovered to where it had been in 2000. From a financial stability viewpoint, a shifting of risks to the household sector should overall have a positive effect in the short-term since it reduces strains on life insurers' balance sheets and leads to a wider diffusion of risks. Nevertheless, the medium-term implications are less clear since insurers, as financial intermediaries, are likely to be better positioned than households to bear and manage investment risk over long horizons.

Chart B16.1 Asset portfolios of euro area insurance companies



Source: ISIS.
Note: The data are derived from a sample of 43 composite insurance firms.

Chart B16.2 Linked and non-linked products and the share of linked products in total assets of euro area insurance companies



Source: ISIS.