

Asset Liability Management (ALM) in the pensions market.

In recent years a revolution in pension fund management has started and the world-wide pension funding crisis is a primary reason for this upheaval. A perfect storm of adverse market movements over the few years has devastated many pension funds. Three years of bear market, a 50-year low of interest rates, combined with dismal prospects for long-term returns are forcing pension investors to rethink their traditional approaches to pension fund management.

The deregulation of markets in Europe and the beginning of the globalisation of insurance and pension markets has also led to growing of competition. All these factors have resulted in changes in the management of assets and liabilities, which considers both sides of the balance sheet as a whole.

ALM means integrated portfolio management, which takes into consideration the risk and return of invested premium income, as well as the corresponding pension liabilities.

This combined view of ALM is of essential importance for Eastern European pension funds. In contrast to mature markets which simultaneously receive contributions and make pension payments to retirees, in the Eastern European countries a large premium income is received today, while most pensionable claims, maturities and surrenders won't start until the medium term.

The main aim of ALM is to provide the necessary information the decision makers need to ensure the financial stability and profitability of a pension fund. It enables the management to investigate the consequences of its decisions from different angles and thereby reach more substantiated decisions.

Typical Questions ALM has to answer are:

- Is my asset portfolio suitable to meet the (actuarial) liabilities today and in the future?
- Does the given portfolio always meet the liquidity requirements?
- How will my undisclosed reserves evolve (regarding the accounting standards)?
- Can we meet the minimum return requirements?
- If not, how large is the probability of falling short of set targets?
- How will the surplus evolve? – Will the scheme be in deficit or surplus and to what extent?

A powerful tool to answer these questions is the application of scenario simulation techniques.

To simulate possible evolutions of assets and liabilities the main driving risk factors have to be identified, interest rates, credit spreads, equity, inflation for example. Based on sophisticated mathematical models a large number (e.g. 10.000) of stochastic, economically consistent scenarios is generated for these risk factors.

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Subsequently the actual performance of the portfolio for the simulated scenarios is determined. Afterwards several risk and return measures can be calculated which answer the above mentioned and many more questions in a comprehensible manner, e.g.:

- What is the impact of adding other asset classes like private equity and hedge funds on liquidity and the risk-return profile of the surplus over time?
- Do we need tailor-made advanced investment strategies and what do they have to look like?

This allows the derivation of the optimal asset allocation in connection with the best investment strategy that fits the needs and constraints imposed by the pension funds' liabilities.

An essential supplement to scenario analysis is stress-testing. Stress-Testing and event-risk assessment is required by many supervisory authorities and will illustrate the effects of extreme and scarce adverse movements of risk factors.

Stress-tests are performed by using deterministic scenarios extracted from the historical development of capital markets and projected synthetic scenarios. Hereby a deeper insight in the structure of the portfolio enables the manager to:

- systematically define emergency plans beforehand;
- identify 'robust' and avoid 'sensitive' portfolio strategies;
- identify hidden or implicit sources of risk for a broader risk profile; and
- indicate critical parameters and assumptions.

ALM is a complex but indispensable task each investor has to meet. However with the adequate tools and expert advice it is possible to cope with a perfect storm almost unharmed and to gain competitive advantage.

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