Good Practices in Social Security

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Asset Liability Modelling Project

A case of the Public Authority for Social Insurance

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Public Authority for Social Insurance
Oman

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Summary

The objective of Asset Liability Modelling (ALM) is not to eliminate risk, but rather to manage risks within a framework that includes self-imposed limits. In setting limits for particular types of risk, the social security fund should consider its solvency position and its risk tolerance. Limits should be set after careful consideration of corporate objectives and circumstances, and should take into account the projected outcomes of scenarios run using a range of plausible future business assumptions. Within these limits, risks can be reduced if this is cost effective, or increased, if justified by the expectation of enhanced returns and the availability of additional capital, without endangering the capacity of the insurer to meet its commitments to policyholders.

The ALM process chosen will vary from entity to entity and reflect circumstances relevant to each insurer and external and internal constraints. External constraints include supervisory and legislative requirements, rating agency concerns, and the interests and expectations of policyholders and other stakeholders. A significant constraint is the liquidity of the assets and liabilities which may compromise the ability to price, measure and hedge exposures.

CRITERIA 1

What was the issue/problem/challenge addressed by your good practice? Please provide a short description.

Asset Liability Modeling is the technique that forms an extension of a normal actuarial valuation process for Public Authority for Social Insurance (PASI), and as the name suggests builds upon the relationship between a fund’s assets and liabilities. The parameters (such as inflation, interest rates and return on assets) which in a normal valuations are assumed to be fixed are allowed to fluctuate in a controlled manner about their long-term assumed values. In mathematical terms this ability to fluctuate over times is called “stochastic”, whereas static projections are termed “deterministic”. By considering the funds’ assets and liabilities in this stochastic manner, PASI is able to calculate a range of likely future valuation results and financial statistics for the fund, from which inferences can be drawn. This helps illustrate the fluctuating nature of the ALM projections, and the way in which the process can investigate the financial standing of PASI at a chosen point in the future, as well as how the fund has arrived at the future position.

CRITERIA 2

What were the main objectives and the expected outcomes?

The main objectives and expected outcomes are to assist the PASI's Board of Directors in:

- determining a long-term asset allocation strategy (by using ALM as a risk assessment tool);
- projecting assets and liabilities into the future for the PASI’ fund;
- quantifying the probability of any adverse financial events;
- quantifying risk versus reward;
- arriving at an appropriate strategic allocation amongst the major asset classes;
- helping to establish a suitable long-term investment policy or benchmark.

CRITERIA 3

What is the innovative approach/strategy followed to achieve the objectives?

- Examination of various policies of interest to the PASI fund, such as the asset allocation currently adopted.
- Examination of investment policies which should improve upon those already considered either in terms of offering improved “most likely” results or reduced uncertainty. These policies can be considered to form an efficient frontier of the trade-off between risk and return achievable by the fund.
- Examination of additional policies of interest to the PASI along with tests of sensitivity of the results to variations in key economic and/or membership assumptions. This helps to ascertain the robustness of the likely policy benchmark to, for example, addressing workforce or alternative fund strategy.

CRITERIA 4

Have the resources and inputs been used in an optimal way to achieve the set objectives and the expected outcomes? Please specify what internal or external evaluations of the practice have taken place and what impact/results have been identified/achieved so far.

The investment department is the sole responsible body to review PASI’s Asset Liability Modeling reporting to the internal Investment Committee. The internal Investment Committee reviews on a quarterly basis from a neutral position the allocation of the PASI fund and overweight/underweight assets. The future plan should be to structure special unit reports directly to the Board that oversees the ALM exercise and implementation.

There are significant benefits in carrying out an Asset Liability Modeling study, including:

- the discussion that in a company such an investigation should improve the understanding of PASI’s Trustees, investment managers and actuary of the investment requirements of the fund;
- ALM provides a way of explicitly examining the implications of different investment policies and different future funding and membership scenarios;
- ALM provides a framework by which the company and Trustees can participate jointly in the financial planning of the fund;
- the results help to steer asset allocation in the most appropriate direction for a fund’s particular liabilities and the Trustees’ attitudes to risk and return;
- the process enables clearer and more relevant investment objectives to be set both for the investment managers and for the fund as a whole.

CRITERIA 5

What lessons have been learned? To what extent would your good practice be appropriate for replication by other social security institutions? Please explain briefly.

The crisis that began with the subprime mortgages and has now become a global meltdown of markets should leave pension fund institutions no doubt that effective risk management and ALM are not optional functions. All social security institutions, irrespective of size, need to develop a strategy and implementation plan for both areas that are properly aligned to the individual institution's strategy.

A practical starting point is to construct a framework for ALM. ALM is not a static activity. Indeed, both risk management and ALM continue to evolve and new aspects are presented that challenge the organization's capacity. Regular board oversight together with a periodic and detailed review process has to be built into the framework to ensure the focus remains appropriate and relevant.

Adopting an asset/liability management philosophy is an important first step in drafting an ALM policy. The philosophy should set out the broad goals and objectives of the social security institution's asset/liability portfolio, as established by the board of directors, who represent the membership at large. This philosophy governs all ALM policy constraints and helps address new situations where policy does not yet exist.

While goals and objectives will differ depending upon the circumstances and environment of the credit union, the ALM philosophy should always address the following principles:

- the social security institution will manage its asset cash flows in relation to its liability cash flows in a manner that contributes adequately to earnings and limits the risk to the financial margin;
- product terms, pricing and balance sheet mix must balance members' product demands with the need to protect the equity of the social security institution;
- financial derivatives instruments must only be used to limit interest rate risk and must never be used for speculative or investment purposes.