

MEMORANDUM

TO: AFIR Scientific Committee

FROM: Heinz Holler, Aktuar DAV

DATE: March27th, 2009

RE: *Submission of talk for the AFIR Colloquium 2009 in Munich*

Dear Sirs,

Milliman would be delighted to present at the AFIR Colloquium 2009 in Munich. Please find below our suggested topic to be presented by **Jeremy Kent** and **Ed Morgan**, both of whom are principals at Milliman and **Aldo Balestreri**, Senior Consultant at Milliman Italy.

Title: Dynamic Asset Liability Management**Abstract:**

The recent crisis has created significant issues for insurers in managing their ALM. Many life insurers have very sophisticated models of their assets and liabilities, but often the focus of these has not been on operational ALM, but rather on longer term projections for MCEV or Economic Capital. This can mean that they do not reflect in detail the types of dynamic interactions which are significant under certain market conditions and are therefore not highly effective for use in ALM beyond setting broad criteria. Regulatory change towards Solvency II and a fair value/realistic approach also leads to greater transparency as regards risk management and the stability of the economic balance sheet. In this context it seems timely to discuss what advances can be made in the area of Dynamic Asset Liability Management. In our presentation we will discuss and illustrate numerically the following areas:

What are the criteria by which we want to optimise ALM? These could for example be to:

- Minimise the volatility of the accounting balance sheet
- Minimise the volatility of the economic balance sheet
- Minimise economic capital requirements
- Achieve a minimum return for a given level of risk
- Achieve stable and commercially attractive policyholder rates of return

We also consider how these objectives could be combined to make a single composite objective by introducing the concept of the "Holistic Balance Sheet"

1. Which interactions does a model have to consider to realistically reflect all material factors which can impact operational ALM. These could include:

- Reinvestment/disinvestment and matching strategies which are sufficiently realistic across a full range of scenarios. Potentially this is an iterative process since the strategy may depend on the optimisation of the ALM study
 - Dynamic policyholder behaviour
 - Profit sharing rules and possible discretionary decisions about profit sharing
 - Impact of future new business
2. A discussion of how a mixture of deterministic and stochastic techniques can be used both to optimise ALM strategy and assess the impact of particular scenarios. We will show how models can be used for performance attribution
 3. A discussion on how a range of different investment strategies can be applied including those using derivatives for hedging purposes.

We will look at these issues considering two major European markets as examples (Spain and Italy) and comment briefly on how they vary in a number of other countries.

We thank you for your consideration and offer my time to address any questions or concerns that you may have.



Heinz Holler

CC: Aldo Balestreri, Jeremy Kent, Ed Morgan