A model for analysing quantitatively the different interests that different stakeholders might have in a pension fund

[Nematrian website page: ERMforPensionFundsModel, © Nematrian 2015]

The model described in this page and in the pages to which it links provides a 'relatively straightforward' (i.e. simplified) model of a defined benefit (primarily final salary) pension scheme. It incorporates within the model framework allowance for the 'sponsor covenant'. It does this by computing the value of different members' future benefit entitlements with and without allowance for the possibility that the scheme sponsor might default. The proportion of any investment returns that pass to different types of beneficiary and/or the sponsor can be computed using a variant of the model. Various potential features that might be of relevance in a live example are included, to illustrate the potential relevance that such points can in practical risk management of the pension fund.

For further details see the MnPFProjectBenefitsXXX functions in the Cash Flow Projection Functions component of the Nematrian web function library.

Examples of output that can be created by such a model, when allied with a relatively straightforward asset/economic scenario modelling/simulation engine are shown in Entity-wide Risk Management for Pension Funds: Model Example.

Inputs used in this Model Example are stylised, to illustrate the potential of the methodology and are not likely to be realistic for any specific scheme. For example, we have here included a cut off at age 80 to reduce run times. We have also used a quite simple asset/economic model, although still sophisticated enough to illustrate in broad terms the impact of investment risk on different stakeholders.

If you are interested in exploring further the application of such methodologies to a specific pension scheme then please contact us or speak to your usual Nematrian contact.