

2017-01-29 7:16 GMT-06:00 Pennanen, Teemu <teemu.pennanen@kcl.ac.uk>:

Dear Mr González Salgado,

I would like to submit the abstract below for presentation in the PBSS Colloquium in Cancun. I couldn't find more specific instructions on abstract submission on the web so please let me know if this is not the correct way.

Best regards,

Teemu Pennanen

Title: Economic valuation of DB-liabilities

Abstract:

In pension finance, one often faces the problem of finding the least amount of capital needed to cover the claim payments of a given liability. In the case of DB liabilities, such problems are often highly nontrivial due to uncertainties in future investment returns, longevity developments and other risk factors that affect the liability payments.

In a deterministic world, the problem would have a simple solution: the least amount of initial capital is given by discounting the projected claim payments by the future rates of investment returns. This is the classical actuarial formula often referred to as the “best estimate”. In the uncertain reality, however, the “best estimate” loses its economic interpretation and often results in problematic valuations when the underlying economic environment changes. Several attempts have been made to adjust the incorrect valuations e.g. by an introduction of a risk margin or by adjusting the discount rates. Such modifications rarely address the actual problem of hedging the claim payments.

Instead of trying to adjust the incorrect valuations, the *economic approach* to liability valuation goes back to the original question and looks for the cheapest hedging strategy that covers the liability payments with an acceptable level of risk. Under “complete markets” assumption, this coincides with the classical Black-Scholes hedging argument and in a deterministic case, one recovers the “best estimate”. The economic approach accounts for uncertainties both in asset returns and liability payments. The approach is illustrated by the valuation of BD-pension liabilities of the whole Finnish private sector pension system.

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