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Feature Articles

Efficient Greek Calculation of Variable Annuity Portfolios for Dynamic Hedging: A Two-Level Metamodeling Approach

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Abstract

The financial risk associated with the guarantees embedded in variable annuities cannot be addressed adequately by traditional actuarial techniques. Dynamical hedging is used in practice to mitigate the financial risk arising from variable annuities. However, a major challenge of dynamical hedging is to calculate the dollar Deltas of a portfolio of variable annuities within a short time interval so that rebalancing can be done on a timely basis. In this artic… mating the partial d… mework. The first-leve… ll-chosen mark… l dollar Delta… eltas. Our numeric… accuracy and spe…

Notes

1 http://www.limra.com/uploadedFiles/limra.com/LIMRA_Root/Posts/PR/Data_Bank/_PDF/2005-2014-Annuities-Estimates-Alternative.pdf