A NEW TYPE OF YIELD CURVE USING DIMENSIONLESS VARIABLES

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Abstract

This paper constructs a new type of yield curve which makes use of dimensionless variables. The new yield curve presents a dimensionless relative interest rate as a function of a dimensionless relative price and a dimensionless remainder of the term, and so is a three-dimensional function itself. Founded on a firm mathematical basis, it would make for easier interpretation than the usual type of yield curve which presents the dimensioned yield-to-maturity rate as a function of the dimensioned remainder of the term. Within the framework of the new methodology inversion of the yield curve is a natural occurrence.

The rules to convert expressions valid for continuous compounding into the equivalent expressions valid for periodic compounding and vice versa are formulated and put into practice.

Key words: Yield curve, dimensional analysis, interest rate, continuous compounding, periodic compounding, bonds.

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