

Two Explicit Formulae for Yield

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Abstract

Historically, it has always been a challenging mathematical task to get an explicit formula for the solution of a polynomial equation of the degree n , when $n > 2$. As we know the yield rate of a portfolio is usually an implicit solution of the algebraic equation of degree greater than 2, i.e., it usually cannot be calculated explicitly by means of a finite number of fractions and radicals. Therefore, the yield of a portfolio of fixed income securities may be estimated by means of iterative methods such as Newton's method, for example.

In this paper we give two explicit formulae that estimate the yield of a portfolio of fixed income securities that are not interest-sensitive. The yield is explicitly estimated in terms of the discounting interest rates of the securities that comprise the portfolio.