

SYNOPSIS

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MODELLING THE GILT EDGED MARKET

BY G. B. CHAPLIN, F.F.A.

(Synopsis of a paper presented to the Society on 2 November 1982)

THE paper reviews mathematical methods of analysing the gilt edged market, with the particular aim of removing some of the mystique surrounding the use of three dimensional models. The paper shows how such a model may be built from the old fashioned yield curve approach simply and in an understandable way by the introduction of a single variable representing a tax rate.

This simple model is shown to have some of the general desirable features of a model, and these ground rules are then discussed in some detail. Other models are discussed and criticized on the basis of these ground rules (including the simple model presented, which is not intended to be a working tool but rather more a 'teaching aid').

The use of models and other techniques in the identification of possible switches is discussed. In particular, it is demonstrated that an improvement in the anomaly position as shown by a model does not necessarily lead to a profit. Indeed, it is demonstrated that this is true for all except one method of identifying anomalies.

Finally, the paper discusses the use of some statistical techniques in the problem of matching (and deliberate mismatching) of assets and liabilities. Decision theory is used to balance risk against possible reward, where risk is measured by variance in profit. To apply the approach in practice the use of different scenarios is advocated, with weightings representing the likelihood of each scenario.

MOTOR PREMIUM RATING

BY S. M. COUTTS

(Synopsis of a paper presented to a joint meeting of the Society and the Royal Statistical Society (General Applications Section) on 30 November 1982).

THE purpose of this paper is to outline some of the statistical and technical aspects of a premium basis for motor insurance. At present, only broad outlines