

On the problem of optimal bond portfolio choice.

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ABSTRACT

This talk is concerned with the problem of *optimal portfolio* (also called *Merton's problem*) when the traded instruments are infinite, in particular the set of zero-coupon bonds.

The paper [2] contains general results, but the optimal choice is characterized in terms of “*generalized strategies*”: these strategies are difficult to obtain in practice, and also the *self-financing condition* is not perfectly clear.

The purpose of this talk is to show that, in some particular bond markets models, the Malliavin's calculus (in particular, the *Clark–Ocone–Karatzas formula*) allows to characterize explicitly the optimal strategy.

The idea of the use of the (infinite-dimensional) Malliavin's calculus in the bond portfolio analysis was introduced in [1], and a similar investigation appeared in [4].

Our method is also compared with the results of [3] ; also some generalizations of “*Merton's Mutual Fund theorem* are analyzed (see [5]).

References

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