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Reflected solutions of generalized anticipated backward double stochastic differential equations. (English) Zbl 1359.60076

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Summary: In this paper, we deal with a new type of differential equations called generalized anticipated backward doubly stochastic differential equations (GA-BDSDEs). The coefficients of these BDSDEs depend on the future value of the solution (Y, Z). We obtain an existence and uniqueness theorem and a comparison theorem for the reflected solutions of these equations.

MSC:

60H10 Stochastic ordinary differential equations (aspects of stochastic analysis)
60H20 Stochastic integral equations

Keywords:

anticipated backward doubly stochastic differential equations; reflected solution; comparison theorem

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