Arbitrage free modelling of the bond market

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The talk will be concerned with a family of forward curves. The forward rate dynamics are driven by a general Lévy process. The no-arbitrage requirement leads to an extended version of the famous Heath-Jarrow-Morton drift condition that involves the Laplace transform of the driving Lévy process. The question under consideration is solvability of the ensuing SDE for the forward rates under the extended HJM drift condition. We will present conditions for its solvability in a suitable Hilbert spaces. Special attention will be paid to the linear case when criteria for existence as well as for explosions of the solutions will be formulated.