Title: Valuing Equity-linked death benefits under trinomial tree model

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We study discrete-time models in which death benefits can depend on a stock price index, the logarithm of which is modeled using a trinomial tree. Examples of such benefit payments include put and call options, barrier options, and lookback options. Because the distribution of the curtate-future-lifetime can be approximated by a linear combination of geometric distributions, it suffices to consider curtate-future-lifetime with a geometric distribution. Closed-form expressions for the expectations of the discounted benefit payment are obtained for a series of options. They are based on results concerning geometric stopping of a random walk. This is a joint paper with Hans U. Gerber and Elias S.W. Shiu.