

Pricing Asian-Style Interest Rate Swaps within a Multi-factor Gaussian HJM Framework

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Abstract

Considering the Asian-style interest rate swap is a stream of interest payments between two parties, this study employs the multi-factor Gaussian Heath-Jarrow-Morton term structure model for developing an analytic evaluation model applied to Asian-style interest rate swaps. The numerical investigation illustrates that the pricing properties of Asian-style interest rate swaps coincide with conventional financial theorems such as the initial term structure of interest rate and, the length of reset periods. But the volatilities of interest rates do not generate significant influence. Finally, Asian-style interest rate swaps are not necessarily less costly than conventional interest rate swaps.

Keywords: Closed-form, Asian-style interest rate swaps, HJM model, path-dependent, LIBOR rate.