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Title:	Option pricing models Black-Scholes & Wavelet-based
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Keywords:	Option pricing Black-Scholes
Issue Date:	May-2020
Publisher:	IISERM
Abstract:	<p>A stock option is a financial contract which gives its owner the right to buy (or sell) a stock for a fixed value in the future. Option pricing models aim to determine a fair price for a stock option. The starting point of option pricing theory is considered to be the Black and Scholes published paper of 1973 providing a model for valuing European options. This thesis aims at studying the discrete-time Binomial model for pricing options, which in the limit goes to the continuous-time Black-Scholes model. Since then, large number of parametric and non-parametric methods have been developed to relax one or more restrictions of the original Black-Scholes model. One amongst them are the Fourier inversion methods, which depend on the availability of an expression for the characteristic function of the stochastic processes modelling the underlying assets. Wavelet theory, viewed as an extension of Fourier analysis, aims to represent complicated functions using sums of simple ones. In wavelets, the building blocks, instead of sinusoidal, are wavelets, which are functions that can be arbitrarily translated and dilated in order to generate basis of $L^2(\mathbb{R})$. The wavelet-based methods are based on the approximation of functions by projecting on the wavelets basis such that the coefficients of the expansion are expressed by means of the Fourier transform of the function to approximate. Two such methods, one each for European and Asian options, are studied and presented.</p>
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