Quantitative Finance > Pricing of Securities

New Financial Research Program: General Option-Price Wave Modeling

Vladimir G. Ivancevic

(Submitted on 23 Jan 2010)

Recently, a novel adaptive wave model for financial option pricing has been proposed in the form of adaptive nonlinear Schr\"{o}dinger (NLS) equation [Ivancevic a], as a high-complexity alternative to the linear Black-Scholes-Merton model [Black-Scholes-Merton]. Its quantum-mechanical basis has been elaborated in [Ivancevic b]. Both the solitary and shock-wave solutions of the nonlinear model, as well as its linear (periodic) quantum simplification are shown to successfully fit the Black-Scholes data, and define the financial Greeks. This initial wave model (called the Ivancevic option pricing model) has been further extended in [Yan], by providing the new NLS solutions in the form of rogue waves (one-rogon and two-rogon solutions). In this letter, I propose a new financial research program, with a goal to develop a general wave-type model for realistic option-pricing prediction and control.
Keywords: General option-price wave modeling, new financial research program

Comments:	5 pages
Subjects:	**Pricing of Securities (q-fin.PR)**; Computational Finance (q-fin.CP)
Cite as:	**arXiv:1001.4151v1 [q-fin.PR]**

Submission history

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.