Cornell University Library

We gratefully acknowledge support from the Simons Foundation and member institutions

arXiv.org > math > arXiv:1205.2521

Search or Article-id

(Help | Advanced search)

All papers ▾ Go!

Mathematics > Probability

From Minority Game to Black & Scholes pricing

Matteo Ortisi, Valerio Zuccolo

(Submitted on 11 May 2012)

In this paper we study the continuum time dynamics of a stock in a market where agents behavior is modeled by a Minority Game with number of strategies for each agent S=2 and "fake" market histories. The dynamics derived is a generalized geometric Brownian motion; from the Black&Scholes formula the calibration of the Minority Game, by means of the game parameter σ^{2}, on the European options on DAX Index market is performed. An "(α,σ^{2}) -matrix" containing, given options' moneyness and maturities, values of the parameters α and σ^{2} that make the theoretical option price agree with the market price is constructed. We conclude that the asymmetric phase of the Minority Game with α close to α_c is coherent with options implied volatility market.

Submission history

From: Matteo Ortisi [view email]

[v1] Fri, 11 May 2012 13:36:43 GMT (21kb)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.

Download:

- PDF
- PostScript
- Other formats

Current browse context:
math.PR
< prev | next >
new | recent | 1205

Change to browse by:

math
q-fin
   q-fin.ST

References & Citations

- NASA ADS

Bookmark(what is this?)