Journal of Statistical Computation and Simulation ›
Volume 87, 2017 - Issue 4

Original Articles

Some contributions to sequential Monte Carlo methods for option pricing

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Pages 733-752 | Received 16 Aug 2015, Accepted 10 Aug 2016, Published online: 29 Aug 2016

Cite this article https://doi.org/10.1080/00949655.2016.1224238 Check for updates

ABSTR

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densities over time. In particular, we approximate the optimal importance sampling distribution in the SMC algorithm by using a sequence of weighting functions. This is demonstrated on two examples, barrier options and target accrual redemption notes (TARNs). We also provide a proof of unbiasedness of our SMC estimate.

KEYWORDS:

Diffusions | sequential Monte Carlo | option pricing

AMS SUBJECT CLASSIFICATION:

91G60 (primary) | 65C05 (secondary)

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes

1. We ha … (n,Sn) and σ(n,sn) t …

2. If μ is … propose. If it is a fu … in the local volatility …

3. We … r, then there … and affects the varia …

4. Path … le copies of the sam … ing unreliab …

Additional information

Funding

AJ was supported by a Singapore Ministry of Education Academic Research Fund Tier 1 grant [R-155-000-156-112] and is affiliated with the RMI and CQF at NUS. YZ was supported by a Singapore Ministry of Education Academic Research Fund Tier 2 grant [R-155-000-143-112].