

324 | 2 | 0
Views | CrossRef citations to date | Altmetric

Original Articles

A stochastic local volatility technique for TARN options

Iñigo Arregui  & Jonatan Ráfales

Pages 1133-1149 | Received 30 Jul 2018, Accepted 07 Apr 2019, Accepted author version posted online: 14 Apr 2019,

Published online: 24 Apr 2019

 Cite this article  <https://doi.org/10.1080/00207160.2019.1608357>



Sample our
Mathematics & Statistics
Journals

>> [Sign in here](#) to start your access
to the latest two volumes for 14 days

 Full Article  Figures & data  References  Citations  Metrics

 Reprints & Permissions

Read this article

Share

ABSTRACT

Target Accumulation Redemption Notes (TARN) are financial derivatives which give their holders the right to receive periodic coupons until the accumulated sum of those ones reaches an agreed target. In this work, we solve a partial differential equations model for TARNs by a finite difference alternating directions method. We combine the numerical resolution with a stochastic local volatility technique and show the numerical results for a particular problem.

KEYWORDS:

Option pricing

TARN

stochastic local volatility

partial differential equations model

alternating directions scheme

Acknowledgements

The authors are very grateful to both reviewers for their valuable comments and suggestions, which contributed to improve the manuscript. They also want to thank their colleague Carlos Vázquez for useful advise.

Disclosure statement

No potential conflict of interest was reported by the authors.

Additional information

Funding

First author is financially supported by Spanish Ministerio de Economía y Competitividad (grant MTM2016-76497-R) and Xunta de Galicia (grant ED431C2018/033, including FEDER funds).

Related research

People also read

Recommended articles

Cited by
2

Information for

[Authors](#)

[R&D professionals](#)

[Editors](#)

[Librarians](#)

[Societies](#)

Opportunities

[Reprints and e-prints](#)

[Advertising solutions](#)

[Accelerated publication](#)

[Corporate access solutions](#)

Open access

[Overview](#)

[Open journals](#)

[Open Select](#)

[Dove Medical Press](#)

[F1000Research](#)

Help and information

[Help and contact](#)

[Newsroom](#)

[All journals](#)

[Books](#)

Keep up to date

Register to receive personalised research and resources by email



Sign me up



Copyright © 2026 Informa UK Limited [Privacy policy](#)

[Cookies](#) [Terms & conditions](#) [Accessibility](#)

Registered in England & Wales No. 01072954
5 Howick Place | London | SW1P 1WG

 Taylor and Francis
Group