

Applied Economics Letters >

Volume 11, 2004 - [Issue 15](#)

159 | 4 | 0
Views | CrossRef citations to date | Altmetric

Original Articles

Pricing European commodity swaptions

Sami Järvinen * & Harri Toivonen

Pages 925-929 | Published online: 22 Aug 2006

 Cite this article  <https://doi.org/10.1080/1350485042000291394>

Sample our
Economics, Finance,
Business & Industry 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

In this paper, formulas for commodity swaptions are presented. By utilizing the forward price based approach a simple closed form solution for European swaptions is derived based on the assumption of deterministic volatility for lognormal variables. The formulas result from applying the Margrabe ([1978](#)) exchange option concept to the present problem. A special case of constant volatility yields the Black ([1976](#)) formula that has been the market standard in the interest rate swaption markets for many years.

 Previous article

[View issue table of contents](#)

Next article 

Notes

The figure comprises of OTC contracts for commodity forwards, swaps and options.

Convenience yield is defined as the benefit derived from holding the physical commodity instead of the futures contract on the underlying. Net convenience yield is convenience yield net of holding period storage costs.

The quotations for longer maturity swaps are usually average-based, which complicates the bootstrapping process.

The formula can be specified so that it uses annual notional and year fractions instead.

The forward floating price leg and the forward fixed price leg do not provide income before the start date of the spot swap, since convenience yields are already capitalized into the forward prices. This can be shown using Ito's Lemma.

Related research

People also read

Recommended articles

Cited by
4

[Determinants of subscription time for portable internet service >](#)

Seung-Hoon Yoo

Applied Economics Letters

Published online: 22 Aug 2006

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 & Francis
by informa