



447 | 16

Views | CrossRef citations to date | 0 Altmetric

Research Papers

# Estimating risk-neutral density with parametric models in interest rate markets

Frank J. Fabozzi , Radu Tunaru & George Albota

Pages 55-70 | Received 29 Aug 2007, Accepted 09 Jun 2008, Published online: 11 Feb 2009

 Cite this article  <https://doi.org/10.1080/14697680802272045>

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](#)

## We Care About Your Privacy

We and our 913 partners store and access personal data, like browsing data or unique identifiers, on your device. Selecting "I Accept" enables tracking technologies to support the purposes shown under "we and our partners process data to provide," whereas selecting "Reject All" or withdrawing your consent will disable them. If trackers are disabled, some content and ads you see may not be as relevant to you. You can resurface this menu to change your choices or withdraw consent at any time by clicking the ["privacy preferences"] link on the bottom of the webpage [or the floating icon on the bottom-left of the webpage, if applicable]. Your choices will have effect within our Website. For more details, refer to our Privacy Policy. [Here](#)

We and our partners process data to provide:

...

 I Accept

Reject All

Show Purpose



Keywords:

## Risk-neutral density

## Real-world density

## Power utility function

## Generalized beta distribution

## Generalized gamma distribution

## Burr3 distribution

## Caps and floors

## Acknowledgements

We thank Simon Brennan, Ashay Kadam, Christoph Schleicher, Catalina Stefanescu, Giovanni Urga, two referees and seminar participants at Cass Business School, City University, for helpful comments on earlier versions of this paper.

The results and the views expressed in this paper are those of the authors and should not be thought to represent those of the Bank of America or any of its subsidiaries.

## Notes

†Brunner and Hafner ([2003](#)) use the estimated RND to price a digital option.

†See for example, [Berlind and Swensson](#)

‡For example, see [Engle \(2002\)](#), and

§A review of the literature referred to I. (2005).

†Dut... we believe  
that on p...

†See, for example, [Klein \(2005\)](#).

## Related Research Data

Nonparametric option pricing under shape restrictions

Source: Journal of Econometrics

How Useful are Implied Distributions?

Source: The Journal of Derivatives

Minimum-Relative-Entropy Calibration of Asset-Pricing Models

Source: International Journal of Theoretical and Applied Finance

A new approach to modeling the dynamics of implied distributions: Theory and evidence from the S&P 500 options

Source: Journal of Banking & Finance

Arbitrage-free estimation of the risk-neutral density from the implied volatility smile

Source: The Journal of Computational Finance

Recovering Probability Distributions from Option Prices

Source: The Journal of Finance

A generalization of the beta distribution with applications

Source: Journal of Econometrics

Nonparametric Estimation of State-Price Densities Implicit in Financial Asset Prices

Source: The Journal of Finance

The Maximum Entropy Distribution of an Asset Inferred from Option Prices

Source: Journal of Financial and Quantitative Analysis

ERM bandwidths for EMU and after: evidence from foreign exchange options

Source: Economic Policy

Implied Volatility Skews and Stock Index Skewness and Kurtosis Implied by S&P 500

Index

Source

CALL

Source

Mark

Source

The p

Source

A

So

Asym

Source

Reco

durin

Source

Extra

Distri

Source: The Journal of Business



Parametric Estimation of Risk Neutral Density Functions

Source: Unknown Repository

Prices of State-Contingent Claims Implicit in Option Prices

Source: The Journal of Business

Estimating Implied PDFs From American Options on Futures: A New Semiparametric Approach

Source: Journal of Futures Markets

New techniques to extract market expectations from financial instruments

Source: Journal of Monetary Economics

EVIDENCE ON DELTA HEDGING AND IMPLIED VOLATILITIES FOR THE BLACK-SCHOLES, GAMMA, AND WEIBULL OPTION PRICING MODELS

Source: The Journal of Financial Research

Option pricing based on the generalized lambda distribution

Source: Journal of Futures Markets

A Simple Option-Pricing Formula

Source: Financial Review

Volatility and Correlation

Source: Unknown Repository

Inferring option-implied investors' risk preferences

Source: Applied Financial Economics

Estimation of Risk-Neutral Densities Using Positive Convolution Approximation

Source: SSRN Electronic Journal

Empi

Source

Optio

Review

Source

Impli

Source

Close

S

Th

Source

Nonp

Source

Appro

Source

Interp

Source



## Related research

People also read

Recommended articles

Cited by  
16

### 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 updates  
by email



Sign up



Copyright © 2024 Taylor & Francis Group  
All rights reserved. Taylor & Francis Group is a not-for-profit business.

Accessibility

Registered  
5 Howick Place