Scenario tree generation and multi-asset financial optimization problems - DTU Orbit (16/01/2019)

Scenario tree generation and multi-asset financial optimization problems
We compare two popular scenario tree generation methods in the context of financial optimization: moment matching and scenario reduction. Using a simple problem with a known analytic solution, moment matching—when ensuring absence of arbitrage—replicates this solution precisely. On the other hand, even if the scenario trees generated by scenario reduction are arbitrage-free, the solutions are biased and highly variable. These results hold for correlated and uncorrelated asset returns, as well as for normal and non-normal returns. © 2013 Elsevier B.V. All rights reserved.

General information
State: Published
Organisations: Department of Management Engineering, Management Science, Vienna University of Economics and Business Administration, University of Liechtenstein
Contributors: Geyer, A., Hanke, M., Weissensteiner, A.
Pages: 494-498
Publication date: 2013
Peer-reviewed: Yes

Publication information
Journal: Operations Research Letters
Volume: 41
Issue number: 5
ISSN (Print): 0167-6377
Ratings:
BFI (2019): BFI-level 2
Web of Science (2019): Indexed yes
BFI (2018): BFI-level 2
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 2
Scopus rating (2017): CiteScore 0.82 SJR 0.669 SNIP 0.767
Web of Science (2017): Impact factor 0.643
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 1.13 SJR 0.814 SNIP 0.94
Web of Science (2016): Impact factor 0.657
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): CiteScore 0.72 SJR 0.648 SNIP 0.73
Web of Science (2015): Impact factor 0.627
BFI (2014): BFI-level 2
Scopus rating (2014): CiteScore 0.99 SJR 0.929 SNIP 0.955
Web of Science (2014): Impact factor 0.617
BFI (2013): BFI-level 2
Scopus rating (2013): CiteScore 1 SJR 0.782 SNIP 1.135
Web of Science (2013): Impact factor 0.624
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 2
Scopus rating (2012): CiteScore 0.85 SJR 0.832 SNIP 0.964
Web of Science (2012): Impact factor 0.519
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 2
Scopus rating (2011): CiteScore 0.96 SJR 0.902 SNIP 1.065
Web of Science (2011): Impact factor 0.537
ISI indexed (2011): ISI indexed yes
BFI (2010): BFI-level 2
Scopus rating (2010): SJR 1.119 SNIP 1.036
Web of Science (2010): Impact factor 0.743
BFI (2009): BFI-level 2
Scopus rating (2009): SJR 0.931 SNIP 1.2
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 1.241 SNIP 1.377
Scopus rating (2007): SJR 1.058 SNIP 1.155
Scopus rating (2006): SJR 0.975 SNIP 1.381
Scopus rating (2005): SJR 0.715 SNIP 1.176
Scopus rating (2004): SJR 0.689 SNIP 1.133
Scopus rating (2003): SJR 0.549 SNIP 0.735
Scopus rating (2002): SJR 0.75 SNIP 1.094
Scopus rating (2001): SJR 0.962 SNIP 1.059
Scopus rating (2000): SJR 0.559 SNIP 1.174
Scopus rating (1999): SJR 0.606 SNIP 0.8

Original language: English
Keywords: Scenario trees, No-arbitrage, Financial optimization, Moment matching, Scenario reduction
DOIs:
10.1016/j.orl.2013.06.003
Source: dtu
Source-ID: n:oai:DTIC-ART:compendex/389696556::30583
Research output: Research - peer-review › Journal article – Annual report year: 2013