







Q



Home ▶ All Journals ▶ Economics, Finance & Business ▶ The European Journal of Finance ▶ List of Issues ► Econometrical analysis of the sample eff Volume 15, Issue 3

The European Journal of Finance >

Volume 15, 2009 - Issue 3

1.353 66 Views CrossRef citations to date Altmetric Original Articles

Econometrical analysis of the sample efficient frontier

Taras Bodnar & Wolfgang Schmid 🔀

Pages 317-335 | Published online: 28 Mar 2009

66 Cite this article ▲ https://doi.org/10.1080/13518470802423478



Abstract

The efficient frontier is a parabola in the mean-variance space which is uniquely determined by three characteristics. Assuming that the portfolio asset returns are independent and multivariate normally distributed, we derive tests and confidence sets for all possible arrangements of these characteristics. Note that all of our results are based on the exact distributions for a finite sample size. Moreover, we determine a confidence region of the whole efficient frontier in the mean-variance space. It is shown that this set is bordered by five parabolas.

Keywords:

asset allocation efficient frontier portfolio analysis mean-variance portfolio parameter uncertainty

interval estimation

JEL Classification:

G11 G12 C12 C13

Related Research Data

Aspects of Multivariate Statistical Theory

Source: Unknown Repository

A Test of the Efficiency of a Given Portfolio

Source: Econometrica

The distribution of the sample variance of the global minimum variance portfolio in

elliptical models

Source: Statistics

The Sampling Error in Estimates of Mean-Variance Efficient Portfolio Weights

Source: The Journal of Finance

Distributional properties of portfolio weights

Source: Journal of Econometrics

Asset Pricing Models: Implications for Expected Returns and Portfolio Selection

Source: Review of Financial Studies

Statistical inference procedure for the mean-variance efficient frontier with estimated

parameters

Related research 1



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











Accessibility



Copyright © 2025 Informa UK Limited Privacy policy Cookies Terms & conditions



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