

Accepted Manuscript

Does Entropy Model with Return Forecasting Enhance Portfolio Performance?

Jing-Rung Yu, Wan-Jiun Paul Chiou, Wen-Yi Lee, Kai-Cheng Yu

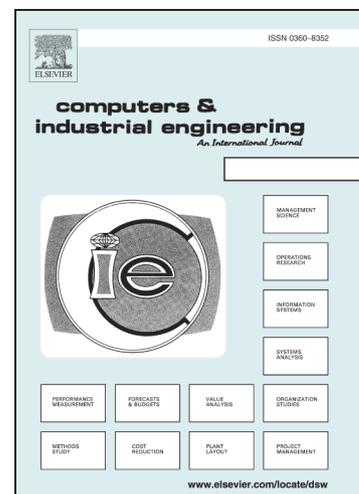
PII: S0360-8352(17)30476-X
DOI: <https://doi.org/10.1016/j.cie.2017.10.007>
Reference: CAIE 4944

To appear in: *Computers & Industrial Engineering*

Received Date: 30 November 2016
Revised Date: 4 March 2017
Accepted Date: 8 October 2017

Please cite this article as: Yu, J-R., Paul Chiou, W-J., Lee, W-Y., Yu, K-C., Does Entropy Model with Return Forecasting Enhance Portfolio Performance?, *Computers & Industrial Engineering* (2017), doi: <https://doi.org/10.1016/j.cie.2017.10.007>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Does Entropy Model with Return Forecasting Enhance Portfolio Performance?

Jing-Rung Yu

Department of Information Management, National Chi Nan University, Nantou, Taiwan
jennifer@ncnu.edu.tw

Wan-Jiun Paul Chiou*

Finance Group, Northeastern University, 360 Huntington Ave., Boston, MA, 02115-5000 USA
w.chiou@neu.edu

Wen-Yi Lee

Department of Technology Management, National Chiao Tung University, Hsinchu, Taiwan
bbooboo2.mt99g@nctu.edu.tw

Kai-Cheng Yu

Department of Information Management, National Chi Nan University, Nantou, Taiwan,
s102213545@ncnu.edu.tw

ABSTRACT

Traditional portfolio models such as the mean-variance framework lean to yield a concentration in a small amount of assets and uncertainty in outcomes due to its sensitivity to the bias in estimation. We develop a portfolio model that synthesizes the techniques improving investment diversity with return forecasting. Specifically, we integrate Yager (1995) entropy with autoregressive integrated moving average (ARIMA) model and evaluate the *ex post* performance of various models by using the data of the S&P 500 stocks. The results show that the entropy model yields higher performance, lower trading costs, and higher portfolio diversity than the corresponding MV model. Adding return forecasting in the entropy model increases portfolio efficiency to respond the market dynamics, especially during the market downturn. Due to its linearity, Yager entropy is more computationally efficient than the MV model and can be useful to asset management.

Keywords: Entropy; Portfolio selection; Forecasting; Multi-Objective; Rebalancing; Short selling; Transaction costs.

* Corresponding author

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات