

Accepted Manuscript

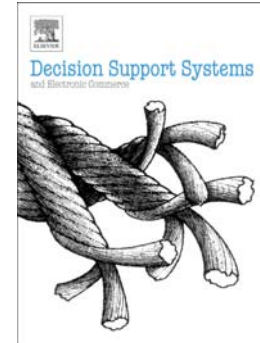
Evaluation of on-line trading systems: Markov- switching vs time-varying parameter models

Michele Fornaciari, Carlo Grillenzoni

PII: S0167-9236(16)30154-3
DOI: doi: [10.1016/j.dss.2016.09.005](https://doi.org/10.1016/j.dss.2016.09.005)
Reference: DECSUP 12762

To appear in: *Decision Support Systems*

Received date: 4 March 2016
Revised date: 28 July 2016
Accepted date: 10 September 2016



Please cite this article as: Michele Fornaciari, Carlo Grillenzoni, Evaluation of on-line trading systems: Markov- switching vs time-varying parameter models, *Decision Support Systems* (2016), doi: [10.1016/j.dss.2016.09.005](https://doi.org/10.1016/j.dss.2016.09.005)

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.

Evaluation of on-line trading systems: Markov-switching vs time-varying parameter models

Michele Fornaciari, Carlo Grillenzoni*

University IUAV of Venice, Venezia, Italy

Abstract

Automatic trading systems, to support the decisions of investors in financial markets, are increasingly used nowadays. Such systems process data on-line and provide signals of buy and sell in correspondence of pits and peaks of the market. Real-time detection of turning points in financial time series is a challenging issue and can only be performed with sequential methods. This paper considers non-linear and non-stationary dynamic models used in statistics and econometrics, and evaluates their performance. In particular, it compares Markov switching (MS) regression and time-varying parameter (TVP) methods; the latter extend moving-average (MA) techniques which are widely used by traders. The novel approach of this paper is to select the coefficients of the detection methods by optimizing the profit objective functions of the trading activity, using statistical estimates as initial values. The paper also develops a sequential approach, based on sliding windows, to cope with the time-variability of MS coefficients. An extensive application to the daily Standard & Poor 500 index (the world's leading indicator of stock values) in the period 1999-2015, provides evidence in favor of models with a few parameters. This seems a natural consequence of the complexity of the gain maximization problem, which usually admits multiple local solutions. Directions for further research are represented by multivariate

*Corresponding author

Email address: carlog@iuav.it (Carlo Grillenzoni)

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