



598 | 133 | 3
Views | CrossRef citations to date | Altmetric

Miscellany

A real-time adaptive trading system using genetic programming

M.A.H. Dempster & C.M. Jones

Pages 397-413 | Published online: 08 Apr 2010

🗨️ Cite this article 🔗 <https://doi.org/10.1088/1469-7688/1/4/301>

Sample our
Economics, Finance,
Business & Industry Journals
>> [Sign in here](#) to start your access
to the latest two volumes for 14 days

🗨️ Citations

📊 Metrics

🖨️ Reprints & Permissions

Read this article

🔗 Share

Abstract

Technical analysis indicators are widely used by traders in financial and commodity markets to predict future price levels and enhance trading profitability. We have previously shown a number of popular indicator-based trading rules to be loss-making when applied individually in a systematic manner. However, technical traders typically use combinations of a broad range of technical indicators. Moreover, successful traders tend to adapt to market conditions by 'dropping' trading rules as soon as they become loss-making or when more profitable rules are found. In this paper we try to emulate such traders by developing a trading system consisting of rules based on combinations of different indicators at different frequencies and lags. An initial portfolio of such rules is selected by a genetic algorithm applied to a number of indicators calculated on a set of US Dollar/British Pound spot foreign exchange tick data from 1994 to 1997 aggregated to various intraday frequencies. The genetic algorithm is subsequently used at regular intervals on out-of-sample data to provide new rules and a feedback system is utilized to rebalance the rule portfolio, thus creating two levels of adaptivity. Despite

the individual indicators being generally loss-making over the data period, the best rule found by the developed system is found to be modestly, but significantly, profitable in the presence of realistic transaction costs.

Log in via your institution

> [Access through your institution](#)

Log in to Taylor & Francis Online



> [Log in](#)

Restore content access

> [Restore content access for purchases made as guest](#)

Purchase options *

Save for later

<div>PDF download + Online access</div> <ul style="list-style-type: none">• 48 hours access to article PDF & online version• Article PDF can be downloaded• Article PDF can be printed <div>EUR 48.00</div>	<div> Add to cart</div>
<div>Issue Purchase</div> <ul style="list-style-type: none">• 30 days online access to complete issue• Article PDFs can be downloaded• Article PDFs can be printed <div>EUR 697.00</div>	<div> Add to cart</div>

* Local tax will be added as applicable

People also read

Recommended articles

Cited by
133

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

