## The Psychophysiology of Real-Time Financial Risk Processing

In Special Collection: CogNet

Andrew W. Lo, Dmitry V. Repin



> Author and Article Information

Journal of Cognitive Neuroscience (2002) 14 (3): 323-339.

https://doi.org/10.1162/089892902317361877

Cite Permissions Share v Views v

## **Abstract**

A longstanding controversy in economics and finance is whether financial markets are governed by rational forces or by emotional responses. We study the importance of emotion in the decision-making process of professional securities traders by measuring their physiological characteristics (e.g., skin conductance, blood volume pulse, etc.) during live trading sessions while simultaneously capturing real-time prices from which market events can be detected. In a sample of 10 traders, we find statistically significant differences in mean electrodermal responses during transient market events relative to no-event control periods, and statistically significant mean changes in cardiovascular variables during periods of heightened market volatility relative to normal-volatility control periods. We also observe significant differences in these physiological responses across the 10 traders that may be systematically related to the traders' levels of experience.

This content is only available as a PDF.

© 2002 Massachusetts Institute of Technology

You do not currently have access to this content.

## Sign in

Don't already have an account? Register

### **Client Account**

Email address / Username

Ski

**Password** 

## Sign In

Reset password

Register

## Sign in via your Institution

Sign in via your Institution

**□** Buy This Article

## **Email Alerts**

**Article Activity Alert** 

Latest Issue Alert



Latest Most Read Most Cited

A Flash in the Pan? Distractor Suppression Cannot Be Inferred from the Early Lateralized Positivity

How Learning to Read Visual Braille Co-opts the Reading Brain

Temporal Evolution of Color Representations Measured with Magnetoencephalography Reveals a "Coarse to Fine" Dynamic

The Development of Event Segmentation: An Introduction to the Special Focus

Skip to Main Content

1

## Cited By

Web of Science (213)

Google Scholar

Crossref (272)

#### **Related Articles**

### Psychophysiological Correlates of Virtual Reality: A Review

Presence: Teleoperators and Virtual Environments (August, 2001)

# The Relationship between Immersion and Psychophysiological Indicators

PRESENCE: Virtual and Augmented Reality (December, 2021)

# Investment Under Uncertainty: Testing the Options Model with Professional Traders

The Review of Economics and Statistics (November, 2010)

Common pitfalls during model specification in psychophysiological interaction analysis

## **Related Book Chapters**

#### Markets and Traders

Market Institutions in Sub-Saharan Africa: Theory and Evidence

#### **Evidence from Agricultural Traders**

Market Institutions in Sub-Saharan Africa: Theory and Evidence

# Attention in Young Infants: A Developmental Psychophysiological Perspective

Handbook of Developmental Cognitive Neuroscience

#### Mobile Traders and Mobile Phones in Ghana

Handbook of Mobile Communication Studies

## **SJournal of Cognitive Neuroscience**

Print ISSN: 0898-929X Online ISSN: 1530-8898



A product of The MIT Press

## Newsletter sign up













### **MIT Press Direct**

About MIT Press Direct

Books

Journals

CogNet

## **Information**

Accessibility at MIT

MIT Press Direct VPAT

For Authors

For Customers

For Librarians

Direct to Open

**Open Access** 

Media Inquiries

Rights and Permissions

For Advertisers

## **MIT Press**

About the MIT Press

The MIT Press Reader

MIT Press Blog

Seasonal Catalogs

MIT Press Home

Give to the MIT Press

## Skip to Main Cotontact Us

FAQ

Direct Service Desk

#### © 2025 The MIT Press

Terms of Use Privacy Statement Crossref Member COUNTER Member

The MIT Press colophon is registered in the U.S. Patent and Trademark Office