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STATISTICAL ARBITRAGE

Algorithmic Trading Insights and Techniques

Andrew Pole

Praise for

STATISTICAL ARBITRAGE

"In this lucid, intelligent, and highly readable book, Andrew Pole presents the insights of an experienced and successful exponent of statistical arbitrage, with an uncommon mixture of flair, accessibility, and academic precision. Anyone with an interest—professional or otherwise—in what goes on inside the black boxes of mathematical trading strategies will enjoy the book."
**—Nick Macleod, Head of Quantitative Research and Risk Management
Ermitage Asset Management Jersey Limited**

"What a find! Andy Pole provides a remarkable look at the history and evolution of what is frequently considered to be the most opaque of the myriad hedge fund strategies. His detailed focus on and clever examples of the underlying drivers of stat arb are an invaluable resource for anyone investigating the strategy for the first time. Even we old-timers will learn something."
**—Judith Posnikoff, PhD, Managing Director
Pacific Alternative Asset Management Company**

"Andy Pole delivers a readable and comprehensive history of statistical arbitrage. Using real-life examples and accounts from his decades of experience, this book chronicles the rise in popularity of stat arb, explains its recent struggle for profitability, as well as provides novices with insights into the art and science of building their own models."
—Susan Kaderabek, Portfolio Manager, Franklin Street Partners

"*Statistical Arbitrage* offers a rare glimpse of insights into the otherwise opaque world of short-term trading strategies. The book provides an excellent balance conceptualizing the mathematics of short-term technical trading strategies with more practical discussions on the recent performance of such strategies. Statistical arbitrage remains for many outsiders, including hedge fund professionals, a 'black box' strategy. Andy Pole has managed to turn black into, if not white, then a lighter shade of gray."
—Christian Thygesen, Managing Director, Investcorp International Inc.

"Andy Pole has extensive practical experience of statistical arbitrage trading together with an ability to explain the underlying theory with great clarity. This book is therefore highly recommended for those looking to master the subject matter."
—Bruce Lockwood, Financial Risk Management

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While statistical arbitrage has faced some tough times—as markets experienced dramatic changes in dynamics beginning in 2000—recent developments in algorithmic trading have fueled the resurgence of this discipline.

With new, sustained patterns of stock price dynamics emerging and some old patterns regaining potency, there are plenty of profitable opportunities available for the shrewd statistical arbitrageur.

Based on the results of author Andrew Pole's own research and extensive experience running a statistical arbitrage hedge fund—in partnership with a group whose own history stretches back to the dawn of what was first called pairs trading—*Statistical Arbitrage* provides you with comprehensive coverage of this proven investment approach. Through real-life examples and detailed discussions, this unique guide presents you with a critical analysis of what statistical arbitrage is and how it has been historically practiced; a formal theoretical underpinning for the existence of opportunities and quantification thereof; and an extensive explanation of the enormous shifts in the structure of the U.S. economy—reflected in the financial markets—with specific focus on the consequences for arbitrage possibilities.

Page by page, you'll become familiar with the nuances of modern statistical arbitrage and discover the algorithmic trading techniques you need to succeed in today's markets. Created with the serious financial professional in mind, this well-written resource:

- Introduces the concept of pairs trading and elaborates on some of its main features

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- Outlines formal statistical models for more general portfolios—several popular models for time series are described, from basic weighted moving averages to dynamic factor analysis
- Addresses important questions for quantifying the magnitude of exploitable opportunities in reversion gambits
- Characterizes the problems that beset statistical arbitrage in 2000 and directly caused its catastrophic drop in returns from 2002 to 2004
- Reveals how statistical arbitrage has rebounded through technological developments in algorithmic trading
- Provides valuable insight into practical model building

Filled with innovative information and expert advice, *Statistical Arbitrage* contains essential analysis that will appeal to individuals looking for an overview of this discipline, and to institutional investors looking for critical insights into modeling, risk management, and implementation of this important strategy.

ANDREW POLE is a Managing Director at TIG Advisors, LLC, a registered investment advisor in New York. He specializes in quantitative trading strategies and risk management. This book is the result of his own research and experience running a statistical arbitrage hedge fund for eight years. Pole is also the coauthor of *Applied Bayesian Forecasting and Time Series Analysis*.

Jacket Design: Loretta Leiva

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