

Preface

This book, *Modeling Trading System Performance* (MTSP), is intended to be an introduction to techniques that can be used to model the performance and risk of trading systems.

MTSP is a sequel to my earlier book, *Quantitative Trading Systems* (QTS). QTS discusses the design, testing, and validation of trading systems. Although it illustrates examples using the AmiBroker trading system development platform, the concepts it discusses are universal.

MTSP is completely platform independent. It assumes the trading system development work is complete. It makes no assumptions about the platform used to develop and test the trading system. It is equally applicable to users of AmiBroker, Excel, MetaStock, TradeStation, WealthLab, or any other platform.

The models in MTSP are Microsoft Excel spreadsheets. The input is either a list of trade by trade results or a table describing the distribution of a set of results. All of the models, examples, and techniques are fully described and fully disclosed. They can be replicated using free or low cost tools.

MTSP uses analogies from gambling to illustrate the effects of uncertainty and to build easily understood simulation models using Monte Carlo simulation.

The simulation models are extended to trading and used to study several aspects of trading, particularly those needed to treat trading as a business. Topics include:

- The relationship between bar length, frequency of trading, length of holding period, profit potential, exposure to closed trade drawdown, and exposure to intra-trade drawdown.
- The relationship between account risk, trading system risk, position sizing, risk of ruin, and goal achievement.
- How to assess the health of a trading system and what to do when it shows signs of being broken.

INTENDED AUDIENCE

Individual traders and trading companies who:

- Have experience in trading system development and trading.
- Want an introduction to Monte Carlo simulation of trading systems.
- Are interested in the characteristics of trading systems, holding periods, risk, profit potential.
- Want practical tools to assess position sizing methods and their effects.
- Want to know how to tell when a trading system is broken, and what to do about that.

ASSUMPTIONS

While this book is intended to be a tutorial, the reader is expected to be reasonably familiar with:

- Computer operations
- Basic techniques used with the Windows operating system, such as the menu system, drag-and-drop, navigating through the file system
- A spreadsheet, such as Excel
- Basic trading methods and terminology

WHAT YOU WILL FIND IN THIS BOOK

Preface – This document (Available as a free download)

Contents – (Available as a free download)

Chapter 1 – Introduction (Available as a free download)

Chapter 2 – Trading as a Business (Available as a free download)

Chapter 3 – Trading Systems (Available as a free download)

Chapter 4 – Expectancy and Roulette

Chapter 5 – Blackjack

Chapter 6 – Monte Carlo Simulation

Chapter 7 – Objective Function

Chapter 8 – Bar Length and Holding Period

Chapter 9 – Holding Period

Chapter 10 – Position Sizing

Chapter 11 – Is It Broken?

Chapter 12 – Summary

Appendix – Tools, Tables, Glossary, References

Index – (Available as a free download)

VERSIONS USED

Excel 2007

THE AUTHOR

Dr. Howard Bandy:

- Has university degrees in mathematics, physics, engineering, and computer science.
- Has specialized in artificial intelligence, applied mathematics, modeling and simulation.
- Was professor of computer science and mathematics, and a university dean.
- Designed and programmed a well-known program for stock selection and timing.
- Was a senior research analyst for a CTA trading firm.
- Is the author of *Quantitative Trading Systems, Modeling Trading System Performance*, and *Introduction to AmiBroker*. *Advanced AmiBroker* is in preparation. All published by Blue Owl Press, Inc.