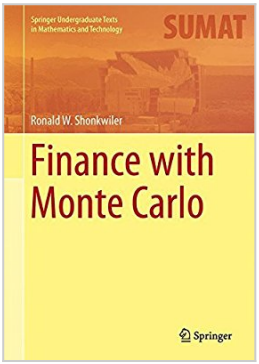

Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology)

By Ronald W. Shonkwiler

Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) By Ronald W. Shonkwiler

This text introduces upper division undergraduate/beginning graduate students in mathematics, finance, or economics, to the core topics of a beginning course in finance/financial engineering. Particular emphasis is placed on exploiting the power of the Monte Carlo method to illustrate and explore financial principles. Monte Carlo is the uniquely appropriate tool for modeling the random factors that drive financial markets and simulating their implications.

The Monte Carlo method is introduced early and it is used in conjunction with the geometric Brownian motion model (GBM) to illustrate and analyze the topics covered in the remainder of the text. Placing focus on Monte Carlo methods allows for students to travel a short road from theory to practical applications.

Coverage includes investment science, mean-variance portfolio theory, option pricing principles, exotic options, option trading strategies, jump diffusion and exponential Lévy alternative models, and the Kelly criterion for maximizing investment growth.

Novel features:

- inclusion of both portfolio theory and contingent claim analysis in a single text
- pricing methodology for exotic options
- expectation analysis of option trading strategies
- pricing models that transcend the Black–Scholes framework
- optimizing investment allocations
- concepts thoroughly explored through numerous simulation exercises
- numerous worked examples and illustrations

The mathematical background required is a year and one-half course in calculus, matrix algebra covering solutions of linear systems, and a knowledge of probability including expectation, densities and the normal distribution. A refresher for these topics is presented in the Appendices. The programming

background needed is how to code branching, loops and subroutines in some mathematical or general purpose language.

The mathematical background required is a year and one-half course in calculus, matrix algebra covering solutions of linear systems, and a knowledge of probability including expectation, densities and the normal distribution. A refresher for these topics is presented in the Appendices. The programming background needed is how to code branching, loops and subroutines in some mathematical or general purpose language.

Also by the author: (with F. Mendivil) *Explorations in Monte Carlo*, ©2009, ISBN: 978-0-387-87836-2; (with J. Herod) *Mathematical Biology: An Introduction with Maple and Matlab*, Second edition, ©2009, ISBN: 978-0-387-70983-3.

Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology)

By Ronald W. Shonkwiler

Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) By Ronald W. Shonkwiler

This text introduces upper division undergraduate/beginning graduate students in mathematics, finance, or economics, to the core topics of a beginning course in finance/financial engineering. Particular emphasis is placed on exploiting the power of the Monte Carlo method to illustrate and explore financial principles. Monte Carlo is the uniquely appropriate tool for modeling the random factors that drive financial markets and simulating their implications.

The Monte Carlo method is introduced early and it is used in conjunction with the geometric Brownian motion model (GBM) to illustrate and analyze the topics covered in the remainder of the text. Placing focus on Monte Carlo methods allows for students to travel a short road from theory to practical applications.

Coverage includes investment science, mean-variance portfolio theory, option pricing principles, exotic options, option trading strategies, jump diffusion and exponential Lévy alternative models, and the Kelly criterion for maximizing investment growth.

Novel features:

- inclusion of both portfolio theory and contingent claim analysis in a single text
- pricing methodology for exotic options
- expectation analysis of option trading strategies
- pricing models that transcend the Black–Scholes framework
- optimizing investment allocations
- concepts thoroughly explored through numerous simulation exercises
- numerous worked examples and illustrations

The mathematical background required is a year and one-half course in calculus, matrix algebra covering solutions of linear systems, and a knowledge of probability including expectation, densities and the normal distribution. A refresher for these topics is presented in the Appendices. The programming background needed is how to code branching, loops and subroutines in some mathematical or general purpose language.

The mathematical background required is a year and one-half course in calculus, matrix algebra covering solutions of linear systems, and a knowledge of probability including expectation, densities and the normal distribution. A refresher for these topics is presented in the Appendices. The programming background needed is how to code branching, loops and subroutines in some mathematical or general purpose language.

Also by the author: (with F. Mendivil) *Explorations in Monte Carlo*, ©2009, ISBN: 978-0-387-87836-2; (with J. Herod) *Mathematical Biology: An Introduction with Maple and Matlab*, Second edition, ©2009, ISBN: 978-0-387-70983-3.

Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) By Ronald W. Shonkwiler Bibliography

- Sales Rank: #1597368 in Books
- Published on: 2013-09-18
- Original language: English
- Number of items: 1
- Dimensions: 10.10" h x .80" w x 7.20" l, 1.89 pounds
- Binding: Hardcover
- 250 pages

Editorial Review

From the Back Cover

This text introduces upper division undergraduate/beginning graduate students in mathematics, finance, or economics, to the core topics of a beginning course in finance/financial engineering. Particular emphasis is placed on exploiting the power of the Monte Carlo method to illustrate and explore financial principles. Monte Carlo is the uniquely appropriate tool for modeling the random factors that drive financial markets and simulating their implications.

The Monte Carlo method is introduced early and it is used in conjunction with the geometric Brownian motion model (GBM) to illustrate and analyze the topics covered in the remainder of the text. Placing focus on Monte Carlo methods allows for students to travel a short road from theory to practical applications.

Coverage includes investment science, mean-variance portfolio theory, option pricing principles, exotic options, option trading strategies, jump diffusion and exponential Lévy alternative models, and the Kelly criterion for maximizing investment growth.

Novel features:

- inclusion of both portfolio theory and contingent claim analysis in a single text
- pricing methodology for exotic options
- expectation analysis of option trading strategies
- pricing models that transcend the Black–Scholes framework
- optimizing investment allocations
- concepts thoroughly explored through numerous simulation exercises
- numerous worked examples and illustrations

The mathematical background required is a year and one-half course in calculus, matrix algebra covering solutions of linear systems, and a knowledge of probability including expectation, densities and the normal distribution. A refresher for these topics is presented in the Appendices. The programming background needed is how to code branching, loops and subroutines in some mathematical or general purpose language.

The mathematical background required is a year and one-half course in calculus, matrix algebra covering solutions of linear systems, and a knowledge of probability including expectation, densities and the normal distribution. A refresher for these topics is presented in the Appendices. The programming background needed is how to code branching, loops and subroutines in some mathematical or general purpose language.

Also by the author: (with F. Mendivil) *Explorations in Monte Carlo*, ©2009, ISBN: 978-0-387-87836-2; (with J. Herod) *Mathematical Biology: An Introduction with Maple and Matlab*, Second edition, ©2009, ISBN: 978-0-387-70983-3.

About the Author

Ronald W. Shonkwiler is a Professor Emeritus in the School of Mathematics at the Georgia Institute of Technology. He received his Masters in Mathematics in 1967, and then his PH.D. in Mathematics in 1970 from the University of Colorado, Boulder. His research includes optimization by Monte Carlo methods, computer geometry, fractal geometry, mathematical epidemiology, neural networks, and mathematical finance. Ronald W. Shonkwiler previously published two books with Springer in the UTM series. "Explorations in Monte Carlo Methods" 2009, ISBN: 978-0-387-87836-2 and "Mathematical Biology, 2nd ed" 2009, ISBN: 978-0-387-70983-3.

Users Review

From reader reviews:

Maria Holder:

Hey guys, do you wants to finds a new book to learn? May be the book with the headline Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) suitable to you? The particular book was written by well-known writer in this era. Often the book untitled Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology)is the main one of several books in which everyone read now. This book was inspired lots of people in the world. When you read this e-book you will enter the new way of measuring that you ever know just before. The author explained their idea in the simple way, and so all of people can easily to understand the core of this reserve. This book will give you a lots of information about this world now. So that you can see the represented of the world with this book.

Willie Batres:

Typically the book Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) has a lot details on it. So when you check out this book you can get a lot of profit. The book was compiled by the very famous author. This articles author makes some research just before write this book. This specific book very easy to read you can obtain the point easily after looking over this book.

Danica Johnson:

Are you kind of hectic person, only have 10 as well as 15 minute in your morning to upgrading your mind expertise or thinking skill even analytical thinking? Then you are receiving problem with the book compared to can satisfy your short time to read it because pretty much everything time you only find guide that need more time to be go through. Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) can be your answer given it can be read by you actually who have those short extra time problems.

Stacy Abercrombie:

That reserve can make you to feel relax. This kind of book Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) was bright colored and of course has pictures around. As we know that book Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) has many kinds or category. Start from kids until youngsters. For example Naruto or Private

investigator Conan you can read and feel that you are the character on there. So , not at all of book usually are make you bored, any it offers up you feel happy, fun and rest. Try to choose the best book for you and try to like reading in which.

Read Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) By Ronald W. Shonkwiler for online ebook

Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) By Ronald W. Shonkwiler Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) By Ronald W. Shonkwiler books to read online.

Online Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) By Ronald W. Shonkwiler ebook PDF download

Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) By Ronald W. Shonkwiler Doc

Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) By Ronald W. Shonkwiler Mobipocket

Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) By Ronald W. Shonkwiler EPub

KAIWZCL4JM2: Finance with Monte Carlo (Springer Undergraduate Texts in Mathematics and Technology) By Ronald W. Shonkwiler