Neural Networks in Finance: Gaining Predictive Edge in the Market (Academic Press Advanced Finance)

Paul D. McNelis
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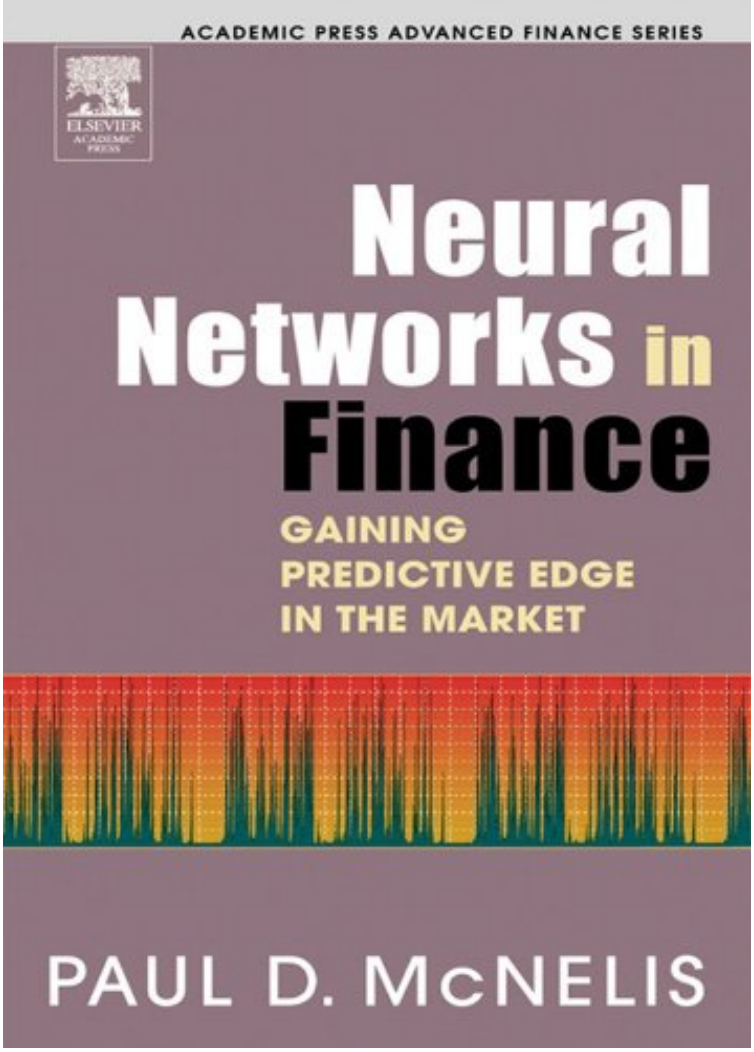

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Paul D. McNelis : Neural Networks in Finance: Gaining Predictive Edge in the Market (Academic Press Advanced Finance) before purchasing it in order to gage whether or not it would be worth my time, and all praised Neural Networks in Finance: Gaining Predictive Edge in the Market (Academic Press Advanced Finance):

1 of 1 people found the following review helpful. A Rough Introduction to Financial Forecasting Using Neural NetworksBy Robin T. Wernick"Neural Networks in Finance" whets the appetite for knowledge on how to build a predictive finanial index. It provides a generally good, but shallow, introduction to the construction of neural nets and gives a few examples implemented in MATLAB.Unfortunately, it fails to explain how the examples reflect the actions

of the networks. Too few examples are given to get any general idea of how to design your own models and only a narrow range of neural models are provided. How the author chose his coefficients is a mystery as well; the discussion is mostly at the highest level before it jumps precipitously into concrete values descending from the ether. Obviously, the mass of financial data preempts the reader from applying MATLAB as an operational tool, it exists as a plotting convenience for the author. The reader is left to his own resources to choose a more suitable(faster) computer language to do the computing and find a way to feed the network the enormous amount of automated data required to keep up with daily changes.The author does something good to restore his credibility in the last two chapters by tackling the problem of discovering the precursor indications that signal specific changes in credit card default and volitility. The author reveals his firm attachment to statistical methodoligy. There is no apparent attempt to discover the ability of the neural networks to produce an 'intuitive' cognitive prediction of anything. You might find a clue in "Practical Neural Network Recipies in C++".On the whole, the book is worthwhile, but serves more to produce a background methodology to confirm your suspicions by using an independent method. It has a place in my library and I'm glad I have it, but it doesn't set my mind on fire.35 of 37 people found the following review helpful. More Mathematical than TechnicalBy Jeffrey HeatonDefiantly more of a math book than a programming guide, but that was what I was expecting. This book explains how to use neural networks in the field of finance. It does so very logically and mathematically. You are shown how to apply neural networks to many different financial problems. But you are mostly left to yourself to actually implement the neural networks on a computer system. Some example source code is provided for MathCad, which is an expensive software package you can buy separately.If you are already comfortable with neural network programming, and are looking to learn to apply neural networks to finance, this book is great. Being a Java programmer I used the open source JOONE package to implement some of the book's examples in Java. Though JOONE is not suited to all examples in the book, it is a good start for a Java programmer.The book shows how neural networks can be applied to many real world financial problems. The book pays particular interest to international finance. The book examines Hong Kong and Japan, examining inflation, deflation, currency volatility, and other issues.I found the book to be very useful in giving me an introduction to neural networks in finance.The table of contents follows:Chapter 1: IntroductionPart 1: Econometric FoundationsChapter 2: What Are Neural Networks?Chapter 3: Estimation of a Network with Evolutionary ComputationChapter 4: Evaluation of Network EstimationPart 2: Applications and ExamplesChapter 5: Estimating and Forecasting with Artificial DataChapter 6: Time Series: Examples from Industry and FinanceChapter 7: Inflation and Deflation: Hong Kong and JapanChapter 8: Classification: Credit Card Default and Bank FailuresChapter 9: Dimensionality Reduction and Implied Volatility Forecasting0 of 3 people found the following review helpful. Great Book for EconometricsBy aThorough, clear and unique. This book provides great intellectual content and also great insight into some interesting code ideas. Would recommend it.

This book explores the intuitive appeal of neural networks and the genetic algorithm in finance. It demonstrates how neural networks used in combination with evolutionary computation outperform classical econometric methods for accuracy in forecasting, classification and dimensionality reduction. McNelis utilizes a variety of examples, from forecasting automobile production and corporate bond spread, to inflation and deflation processes in Hong Kong and Japan, to credit card default in Germany to bank failures in Texas, to cap-floor volatilities in New York and Hong Kong.* Offers a balanced, critical review of the neural network methods and genetic algorithms used in finance * Includes numerous examples and applications * Numerical illustrations use MATLAB code and the book is accompanied by a website

"This book clarifies many of the mysteries of Neural Networks and related optimization techniques for researchers in both economics and finance. It contains many practical examples backed up with computer programs for readers to explore. I recommend it to anyone who wants to understand methods used in nonlinear forecasting."-- Blake LeBaron, Professor of Finance, Brandeis University"An important addition to the select collection of books on financial econometrics, Paul Mcnelis' volume, Neural Networks in Finance, serves as an important reference on neural network models of nonlinear dynamics as a practical econometric tool for better decision-making in financial markets." -- Roberto S. Mariano, Dean of School of Economics and Social Sciences Vice-Provost for Research, Singapore Management University; Professor Emeritus of Economics, University of Pennsylvania"This book represents an impressive step forward in the exposition and application of evolutionary computational tools. The author illustrates the potency of evolutionary computational tools through multiple examples, which contrast the predictive outcomes from the evolutionary approach with others of a linear and general non-linear variety. The book will be of utmost appeal to both academics throughout the social sciences as well as practitioners, especially in the area of finance." -- Carlos Asilis, Portfolio Manager, VegaPlus Capital Partners; formerly Chief Investment Strategist, JPMorgan Chase "...an excellent, easy-to read introduction to the math behind neural networks."- Financial Engineering NewsFrom the Back Cover[back jacket]Business/Finance Neural Networks in FinanceGaining Predictive Edge in the MarketPaul McNelis"This book clarifies many of the mysteries of Neural Networks and related optimization techniques for

researchers in both economics and finance. It contains many practical examples backed up with computer programs for readers to explore. I recommend it to anyone who wants to understand methods used in nonlinear forecasting." Blake LeBaron, Professor of Finance, Brandeis University "An important addition to the select collection of books on financial econometricshellip; Neural Networks in Finance serves as an important reference on neural network models of nonlinear dynamics as a practical econometric tool for better decision-making in financial markets." Roberto S. Mariano, Dean of School of Economics and Social Sciences Vice-Provost for Research, Singapore Management University; Professor Emeritus of Economics, University of PennsylvaniaNeural Networks in Finance explores the intuitive appeal of neural networks and the genetic algorithm in finance. It demonstrates how neural networks used in combination with evolutionary computation outperform classical econometric methods for accuracy in forecasting, classification and dimensionality reduction. The text shows that these networks are easy to implement and interpret once the time-honored quest for closed form solutions is reconsidered.McNelis utilizes a variety of examples, from forecasting automobile production and corporate bond spread, to inflation and deflation processes in Hong Kong and Japan, to credit card default in Germany, to bank failures in Texas, to cap-floor volatilities in New York and Hong Kong. Numerical illustrations use MATLAB code and the book is accompanied by a website.About the AuthorBy Paul D. McNelis