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after Observing the Data: The Choice of Estimators; Decisions and Loss; Loss and Prior Information; Chapter 3 Model Uncertainty; Bayesian Model Comparison; Bayes Factors; Marginal Likelihoods; Parsimony; Bayes Factors versus Information Criteria; Bayes Factors versus Likelihood Ratios; Models as Nuisance Parameters; The Space of Models; Mixtures of Models; Uncertainty in Pricing Models; Front-Office Models; The Statistical Nature of Front-Office Models; A Note on Backtesting
Part 2 Sequential Learning with Adaptive Statistical ModelsChapter 4 Introduction to Sequential Modeling; Sequential Bayesian Inference; Achieving Adaptivity via Discounting; Discounting in the Beta-Bernoulli Model; Discounting in the Linear Regression Model; Comparison with the Time-Invariant Case; Accounting for Uncertainty in Sequential Models; Chapter 5 Bayesian Inference in State-Space Time Series Models; State Space Models of Time Series; The Filtering Problem; The Smoothing Problem; Dynamic Linear Models; General Form; Polynomial Trend Components; Seasonal Components
Regression ComponentsBuilding DLMs with Components; Recursive Relationships in the DLM; Filtering Recursion; Smoothing Recursion; Predictive Distributions and Forecasting; Variance Estimation; Univariate Case; Multivariate Case; Sequential Model Comparison; Chapter 6 Sequential Monte Carlo Inference; Nonlinear and Non-Normal Models; Gibbs Sampling; Forward-Filtering Backward-Sampling; State Learning with Particle Filters; The Particle Set; A First Particle Filter: The Bootstrap Filter; The Auxiliary Particle Filter; Joint Learning of Parameters and States; The Liu-West Filter
Improving Efficiency with Sufficient Statistics

Sommario/riassunto

A risk measurement and management framework that takes model risk seriously Most financial risk models assume the future will look like the past, but effective risk management depends on identifying fundamental changes in the marketplace as they occur. Bayesian Risk Management details a more flexible approach to risk management, and provides tools to measure financial risk in a dynamic market environment. This book opens discussion about uncertainty in model parameters, model specifications, and model-driven forecasts in a way that standard statistical risk measurement does not. And unlike cu