

Daniel H. Stahl

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EXPERIENCE

Senior Model Validation Analyst November 2016-Present
Regions Bank, Birmingham, AL

- Lead development team for an app to facilitate model validation
- Lead annual reviews and exams of relationship profitability tools and market risk models
- Validated the theoretical design for the ALLL model

EXPERIENCE

Senior Manager of Portfolio Analytics May 2016-November 2016
Global Lending Services, Greenville, SC

- Created time-to-default models for subprime auto loans
- Created time-dependent transition matrix models for estimating losses to the subprime loan portfolio
- Monte Carlo engine for simulating portfolio loss to arbitrary future times
- Transitioned model development to Azure for transparency and efficiency

EXPERIENCE

Internal Auditor/Senior Internal Auditor in Audit Analytics July 2014-Present
BB&T, Winston-Salem, NC

- As part of Model Risk Management audit, reviewed and re-performed model validations for a wide variety of bank models including the Market VaR model, the ALLL model, CCAR models, and Economic Capital models.
 - 26 models reviewed with partial re-performance
 - 2 models reviewed with full re-performance including credit Economic Capital
- Integral role in developing Audit Analytics into a mature group
 - Built and administered databases
 - Designed websites for processing request tickets
 - Created robust web data analytics tools using SQL server and JavaScript/HTML (Node.js)
 - Created automated workflow for creation of audit tests
 - Wrote policy describing Audit Analytics' role and responsibilities

EXPERIENCE

Risk Management Officer

July 2012-July 2014

Uwharrie Capital Corp, Albemarle, NC

- Responsible for Risk Management of Uwharrie Capital, a bank holding company
- Sole developer for credit risk models including ALLL
 - Computed loan portfolio value at risk
 - Assigned risk contribution to each credit
- Developed and implemented stress tests
 - Demonstrated the effect of real estate depreciation on the loan portfolio
 - Demonstrated the effect of interest rate increases on debt service coverage
- Reported results to the Board of Directors

EXPERIENCE

Model implementations

2012-Present

- Two analytic extensions to credit economic capital models
- Loan pricing models (prepayment and default optionality)
- Extensions to the LDA operational risk model (including correlated severity and frequency)
- Option pricing models
 - Levy processes including CGMY, Brownian motion, variance gamma
 - Monte Carlo techniques including variance reduction
 - Market models including Hull-White, Cox-Ingersoll-Ross, Vasicek
 - LIBOR Market model
 - Heath-Jarrow-Morton framework
 - Inversion techniques including Carr-Madan FFT, Fourier Space-Time Stepping, and COS method
 - Tree techniques including generic tree pricing for any one-dimensional stochastic differential equation

PUBLICATIONS

Journal of Credit Risk: Loss Distributions: Computational Efficiency in an Extended Framework (December 2015). This paper demonstrates a method of using Fourier transforms to efficiently compute loss densities for granular portfolios.

Journal of Operational Risk: Operational Loss with Correlated Frequency and Severity: an Analytical Approach (Forthcoming). This paper uses the concept of a “Leverage Neutral” measure to induce correlation between frequency and severity distributions while retaining computational tractability.

MAJOR PROJECTS

- Managed project to deliver policy tests and other risk-based metrics for BB&T’s active directory. Worked with management and stakeholders to assess requirements and provide status updates.
- Managed project to develop credit loss models including marginal risk contributions at the loan level for Uwharrie Capital Corp. Reported results to the Board of Directors.

- Performed myriad personal projects including complex market risk models as evidenced on my GitHub page.

EDUCATION

Master of Science, Mathematical Finance Spring 2013
University of North Carolina at Charlotte
Charlotte, NC

- Classes included stochastic calculus, three courses on option pricing, two courses on time series, numerical solutions to PDEs, Monte Carlo simulations
- 4.0 GPA

Bachelor of Arts, Economics Spring 2011
Calvin College
Grand Rapids, MI

COMPUTER SKILLS

Languages: SQL, C++, Java, R, Matlab, JavaScript (including ReactJS, AngularJS, MongoDB, NodeJS, EmberJS), CSS (including Bootstrap), HTML
Operating Systems: I run Ubuntu (Linux) on my home computer for personal application development.

MISCELLANIOUS

Member of Toastmasters Acted as toastmaster, evaluated two speeches, and given six speeches