**Prescient Models**

Hellenic Financial Stability Fund presents

Reinventing Retail Lending Analytics:
Scoring, Forecasting, Stress Testing , and Capital for a World of Uncertainty — by Joseph L. Breeden, PhD

Course Overview

Retail lending has changed dramatically in the last couple of decades, moving from a largely intuitive process to an increasingly automated one. With automation comes the danger of rapidly magnifying problems, as with the U.S. mortgage crisis. Reliance on weak, out-dated models can create portfolio disasters. Managing a retail loan portfolio successfully depends on properly developing, validating, deploying, and integrating a wide range of models.
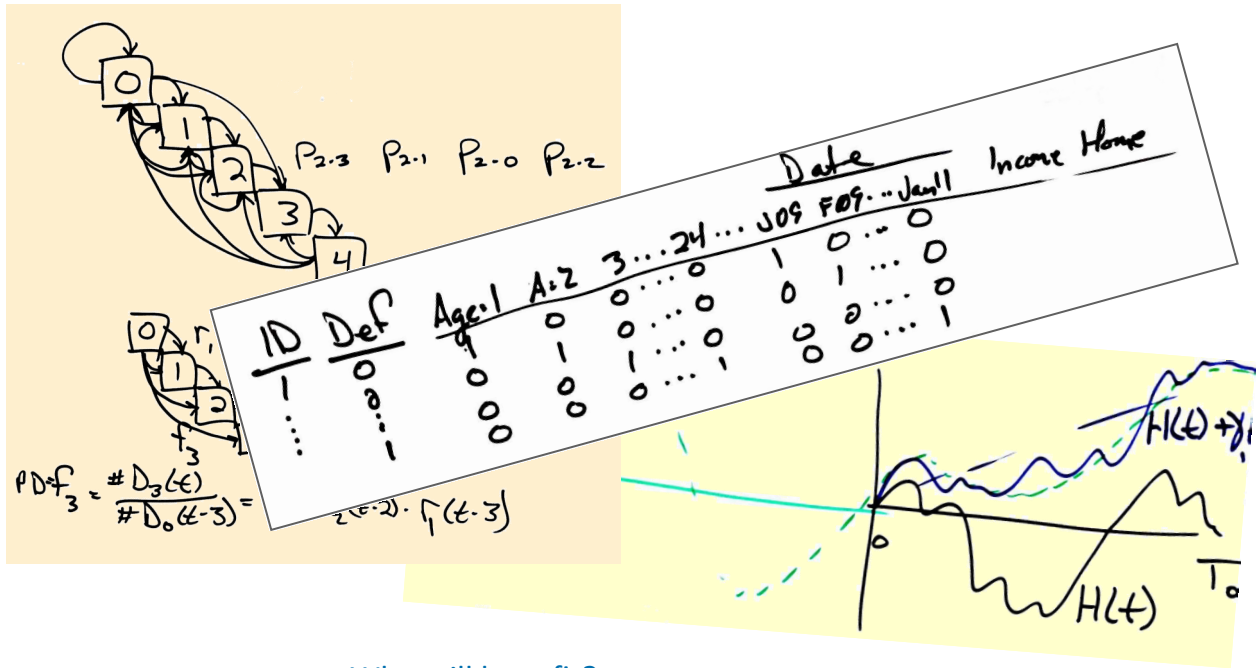
HFSF

presents

Seeing the future through models.

For enquiries about this course please see contact details below:

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Who will benefit?

This course is for modelers, analysts, and credit professionals who are involved in modeling or managing retail lending and small business portfolios.

Although the course covers the development and use of sophisticated analytical techniques, it is intended for portfolio managers, financial analysts, credit policy professionals, and statistical analysts. Anyone with decision-making responsibility in this field will benefit. Discussions will minimize mathematical derivations, instead emphasizing intuitive understanding, use of available algorithms, and best practices in application.

You will

- Learn the basics of retail lending analytics.

- Gain an understanding for when these methods can be used reliably, when they fail, and how to use new methods to succeed.

- Obtain a deep understanding of the drivers of credit risk, and how various models capture some, or all, of these drivers.

- Study the latest techniques for moving from rank-order scoring to loan-level probability forecasting.

- Modeling issues in Basel II & III

Location

Athens, Greece (location TBC)

Instructor

Joseph L. Breeden Ph.D., Chief Executive Officer, Prescient Models
www.prescientmodels.com

Dr. Breeden has almost 20 years of experience in financial services and is a recognized leader in the industry. At Prescient Models, he is directly involved in research into new modeling techniques and products. He co-founded Strategic Analytics in 1999, where he led the design of advanced analytic solutions including the invention of Dual-time Dynamics.

Dr. Breeden has created models through the 1995 Mexican peso crisis, the 1997 Asian economic crisis, the 2001 global recession, the 2003 Hong Kong SARS recession, and the 2007–2009 U.S. mortgage crisis and global financial crisis. These crises have provided Dr. Breeden with a rare perspective on crisis management and the analytics needs of executives for strategic decision-making. Dr. Breeden's own models were successful throughout the U.S. mortgage crisis and warned of problems as early as the beginning of 2006. Similar courses have been held around the globe, in Russia, Singapore, USA, and Germany.

His book *Reinventing Retail Lending Analytics: Forecasting, Stress Testing, Capital, and Scoring for a World of Crises* was published by Riskbooks in 2010. He currently serves as associate editor for the *Journal of Risk Model Validation*.

Curriculum

November 19 (9:00 a.m. – 5:00 p.m.)

- Dynamics of Retail Lending
- Drivers of Retail Loan Performance
- Age-Vintage-Time Dependency
- Macroeconomic Adverse Selection
- Why is Managing Retail Portfolios so Difficult?

November 20 (9:00 a.m. – 5:00 p.m.)

- Loan-level Analysis
- Overview of Modeling Techniques
- Scoring Techniques and their Weaknesses
- Loan-level Methods for Predicting Probabilities
- Survival Models
- Panel Data Methods / GLM / GLMM
- Data Requirements
- When not to use A-V-T Models
- Using Loan-level Models for Portfolio Analysis
- Using Aggregate Models for Portfolio Analysis
- Vintage Analysis

November 21 (9:00 a.m. – 1:00 p.m.)

- Including Macroeconomic Factors for Stress Testing
- Variable Selection
- Proper Transformations
- Data Requirements
- Scenario Design
- Model Validation
- Volatility Analysis, Capital, and Basel II/III
- Unconditional (Through-the-Cycle) Volatility Analysis with A-V-T Models
- Conditional (Point-in-Time) Volatility Analysis via Monte Carlo Simulation
- Asset-Correlation Models
- Basel II Best Practices
- Basel III Modeling Opportunities
- Correlation and Capital Aggregation

Prerequisites

You should be comfortable with the basics of retail lending in at least one area, have some familiarity with building models in banking, and have a basic understanding of credit scoring.