

Thomas Jacobs, FRM, PRM, PhD
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Academic Positions

DePaul University, Assistant Professor of Finance, 2010-Present

Education

University of Illinois at Urbana-Champaign, Ph.D. in Finance, 2010

Dissertation: “Three Essays in Empirical Asset Pricing”

Committee: George Pennacchi (Chair), Charles Kahn, Neil Pearson, and Tim Johnson

Illinois Distinguished Fellowship recipient 2002-2003, 2004-2005, and 2005-2006 academic years
- only twelve Distinguished Fellowships awarded each year within the Graduate College

Hewitt Fellowship 2004-2005, 2005-2006

Beatrice Fellowship 2002-2003

Boston College, M.S. in Finance, 1994

Outstanding Academic Achievement Award as top graduate of my class

University of Alaska Fairbanks, M.S. in Engineering & Science Management, 1991

Coursework completed on site (May, 1990), thesis completed in MA and defended on site (May, 1991)

University of Notre Dame, B.S. in Mathematics, 1986

U. S. Air Force Reserve Officer Training Corps (ROTC) Full Four Year Scholarship.

Teaching Experience

DePaul University, Chicago, Illinois

Fin 362 Risk Management Fall Quarter, 2010-Present, Honors and non-honors students with section sizes from 21-55

Created newly required undergraduate Finance course from skeleton syllabus upon arrival at DePaul. Course emphasizes derivative use and function over pricing. Risk management focus for course emphasizes non-Financial institutions and the challenges of the hedging decision. Covers market risk, credit risk, operational risk and risk adjusted return methodologies. Principal cases are Orange County, California (1994), Long Term Capital Management (1998), and Enron (2001).

Boston College, Chestnut Hill, Massachusetts

Lecturer, Carroll Graduate School of Management, Spring Semester 1996

Taught MF860 Master's Seminar in Finance to class of 45 students (Introduction to Derivatives and Risk Management)

Began with an existing syllabus for a derivatives course emphasizing commodity and equity products. Modified this to focus on interest rate and foreign exchange products as well as introducing market and credit risk measurement, management and reporting to include risk adjusted return on capital methodologies (RAROC) as implemented by trading desks.

Working Papers

“Changing [Market Perceptions of Who is 'Too Big To Fail' During the Financial Crisis of 2007-2008](#)”
August, 2010

“Limits to Arbitrage in the U.S. Markets for Inflation” July, 2010 with George Pennacchi

“Credit Default Swaps in the Performance of Event Studies” June, 2010 with Adam Ashcraft and Neil Pearson

Work in Progress

“The Risk Structure of Interest Rates Revisited”

“Looking for the Size Cutoff of 'Too Big To Fail' Banking Institutions”

Conference and Seminar Presentations

Illinois Economics Association Annual Meeting, October 15-16, 2010

Bank of England Seminar Presentation, October 1, 2010

Norges Bank Conference on “Government Intervention and Moral Hazard in the Financial Sector”, Oslo, Norway, September 2-3, 2010

Conference Discussions

Discussant of Bala Batavia and Nicholas Lash, “Government Economic Intervention and Corruption,” Illinois Economics Association Annual Meeting, October 15-16, 2010

Professional Activities

Chicago Steering Committee Member, Professional Risk Manager’s International Association, September 2010-Present

Professional Presentations

“**Systemic Risk Implications of Dodd-Frank,**”

Professional Risk Manager's International Association (PRMIA), Chicago Chapter Seminar, June 1, 2012.

“**CDO Asset Selection and Structuring: The Issuer Perspective,**”

Global Association of Risk Professionals Chicago Chapter Meeting, Chicago, Illinois, March 15, 2001.

“**Optimal Asset Selection for CLO Structures,**”

Credit Risk Summit 2000 sponsored by Risk Magazine, New York, New York, September 28, 2000.

“**Credit Exposure Measurement Applied to Reserving and Credit Capital for Derivative Portfolios,**”

Credit Risk Portfolio Management of Derivatives Conference sponsored by Risk Magazine, New York, New York, December 4, 1998.

“**Credit Derivatives: An Introduction to their Use and Pricing,**”

Global Association of Risk Professionals Boston Chapter Meeting, Boston, Massachusetts, October 21, 1998.

Professional Memberships and Designations

American Finance Association

Financial Management Association

Midwest Finance Association

Global Association of Risk Professionals (GARP): Financial Risk Manager (FRM) designation

Professional Risk Manager’s International Association (PRMIA): Professional Risk Manager (PRM) designation

International Association of Financial Engineers

Chicago Council of Global Affairs

Professional Experience

Economic Capital Specialist, Federal Reserve Bank of Chicago, Chicago, Illinois

The Capital Group, 2003 – 2004

Dual research and bank examination roles within Risk Specialists Division of Supervision and Regulation

- Research of probabilistic yield curve generation in support of asset liability risk identification
- Bank examination efforts focused upon credit risk models for economic capital and market risk aspects of fixed income portfolios including municipal bonds, mortgage backed securities, and derivative trading

Managing Director and Head of Analytics, Bank of America, Chicago, Illinois

Portfolio Management, 1999 – 2001

First group to apply Portfolio Management techniques to loans at Bank of America

- Led team of 3 professionals
- Presented Portfolio Management theory and principles to a variety of senior management representatives

Implemented KMV's Portfolio Manager software tool and integrated its results with pricing data from the bond, loan and credit derivative markets to support decision-making activity for the US Credit Products portfolio.

- Examined and rejected other industry models (CreditManager, CreditPortfolioView, and CreditRisk+)
- Planned and directed an infrastructure development review of information available for implementation
- Tested and validated the KMV model with the bank's data to ensure reasonableness of results
- Designed relative value measures to compare pricing of instruments across markets

Designed and implemented an asset selection model in support of planned Cash (\$2 Billion) and Synthetic (\$10 Billion) Collateralized Loan Obligation (CLO) activities

- Worked across institutional impediments to sell the concept and theory of employing KMV's risk measures as the focus of populating a securitization vehicle
- Oversaw creation of database of information regarding assets, their risks and their rating agency measures
- Created and implemented a genetic algorithm to optimize the selection of the asset pool while still meeting the rating agency, regulatory, and marketing constraints of each transaction
- Presented the theory, application and results to a variety of bank and industry audiences such as Risk Magazine's September 2000 Credit Risk Summit GARP Chicago in March 2001

Implemented 1st stage of a mark to market capacity for all existing and new loan origination within US Corporate Bank

- Created a daily process beginning with internal desk and EJVs updates of bond prices along with an automated asset swap process to create name specific credit spread curves, regression modeled curves or proxy spreads for each name in the US Corporate bank (60% of which lack traded instruments)
- Implemented a loan cashflow pricing tool to value new and existing draws
- Outlined a staged approach for pricing the optionality embedded within undrawn commitments

Director, BankBoston, Boston, Massachusetts

Financial Engineering, 1996 – 1999

Global Financial Risk Management, 1994 – 1996

Led team of 6 professionals

Designed and implemented Waterfall and Residual Valuation Models in support of BKB's \$2.2 Billion CLO issuance.

Assessed BKB's Commercial and Industrial (C&I) Loan Portfolio credit stress model recommending improvements & contrasting with industry models (CreditManager, KMV's Portfolio Manager, CreditRisk+, CreditPortfolioView, LAS).

Presented at industry conferences: interest rate derivative credit risk, capital and reserving; pricing and use of credit derivatives; regulatory approaches to market and credit risk.

Single-handedly created and implemented methodologies to measure the credit capital, expected loss and risk adjusted returns for the five businesses comprising Capital Markets.

Designed and implemented models to:

- Price Default Swaps using the Jarrow-Turnbull approach
- Measure the counterparty credit exposure of at-market Default Swaps
- Measure the risk adjusted return of Total Rate of Return Swaps inclusive of collateral calls and country risk
- Measure the risk adjusted return of customer and proprietary emerging market repurchase agreements
- Calibrate and price Eurodollar Derivatives using either the Hull & White or Black & Karasinski models
- Measure the VAR of High Yield Bonds, Distressed Debt and Emerging Market Options and Securities

Prepared and delivered presentations to Senior Management on the following topics:

- A centralized portfolio management function for credit risk and return
- Regulatory, economic and peer bank rules for calculating market and credit risk capital
- Market risk measurement methodologies for Value-at-Risk (VAR) and stress testing
- Interest rate risk, value-at-risk and risk capital as well as Stern Stewart's EVA/SVA methodology

Authored business specifications for measuring the market risk of the Emerging Market, High Yield and Fixed Income trading businesses utilizing the historical simulation methodology. These specifications addressed all aspects of market risk management including data, instrument pricing, portfolio aggregation, liquidity, hedging, reporting and stress testing.

Analyzed existing retail deposit account modeling assumptions and the effects of modifying these assumptions to include the impact of cap and floor positions on the accounts. Implemented Black's model to value caps and floors.

Senior Systems Analyst, John Hancock Mutual Life Insurance, Boston, MA, 1990 - 1993

Received two John Hancock special awards for re-engineering and running the Liability Projection System (LPS) and reporting the aggregate Guaranteed Investment Contract (GIC) liability values of John Hancock (\$12 Billion) on a monthly basis. Reduced the reporting turnaround time from three weeks to two days.

Designed and implemented flexible models (replacing existing APL based systems) in the PL/I programming language to:

- value the embedded option in certain GIC contracts using Monte Carlo simulation
- determine the present value, duration, convexity and dispersion of a cash flow feed

Electronic Warfare Officer, United States Air Force, 1986 - 1990

As the Sensor Operator (SO) aboard the research and development aircraft RC-135X Cobra Eye, directed the cryogenically cooled infrared telescope in collection of infrared data. Received 1989 General Jerome F. O'Malley Award as member of the Air Force's Top Reconnaissance Crew for performance of first successful collections with the sensor.

Awarded both the Commander's Cup trophy as Top Graduate of Navigator Training School (class of 50) as well as the Colonel Mike Gilroy award as Top Graduate of Electronic Warfare School (class of 15) at Mather Air Force Base, CA.

Honors and Awards

Illinois Distinguished Fellowship, University of Illinois, 2002-2003, 2004-2006

Hewitt Fellowship, University of Illinois, 2004-2006

Beatrice Fellowship, University of Illinois, 2002-2003

Outstanding Academic Achievement Award, Boston College, 1994

The Air Medal, United States Air Force, 1989

General Jerome F. O'Malley Award, United States Air Force, 1989

Commander's Cup Trophy, United States Air Force, 1988

Colonel Mike Gilroy Award, United States Air Force, 1988

Wright Aeronautical Laboratories Award, United States Air Force, 1988

AFROTC Four Year Scholarship, United States Air Force, 1982-1986

Technical Skills

Database Programming: MySQL, Microsoft Access and Sequel Server

Econometric and Related: Stata, SAS, Matlab, and R

Programming Languages: Visual Basic, APL, Fortran, PL/I, Cobol and C

Other: MiKTeX & TeXnicCenter LaTeX implementation, Amaya web editor, and Microsoft Office applications

Academic References

George Pennacchi, Professor of Finance (Chair)

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Charles Kahn, Fred S. Bailey Memorial Chair of Finance and Professor of Finance and Department Chair

340 Wohlers Hall, 1206 South Sixth Street, Champaign IL 61820

(217) 333-2813 c-kahn@illinois.edu

Neil Pearson, Harry A. Brandt Distinguished Professor of Financial Markets and Options and Professor of Finance

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Robert Taggart, Professor of Finance

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