Caio Ibsen Rodrigues de Almeida

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Academic Positions

07/2006-present **Assistant Professor**, Graduate School of Economics, Getulio Vargas Foundation

08/2001-06/2006 **Assistant Professor**, Department of Economics and Business School, IBMEC-RJ

06/2001-07/2003 **Adjunct Professor**, M.S. Program in Financial Mathematics, IMPA-RJ

08/2002-07/2004 **Post-Doctorate**, Department of Mathematics, Stanford University

Education

Ph.D. in Electrical Engineering (Applied Statistics, 1998-2001)
Catholic University of Rio de Janeiro (PUC-RJ)
Thesis: Term Structure of Interest Rates: Tests & Applic. in Emerging Markets
Advisors: Cristiano Fernandes (PUC-RJ) and Antonio Duarte (IBMEC-RJ)

Post Graduation in Mathematics (Probability, 1998-1999)
Intituto de Matemática Pura e Aplicada (IMPA-RJ)

M.S. in Electrical Engineering (Applied Statistics, 1996-1998)
Catholic University of Rio de Janeiro

B.S. in Computer Engineering (1991-1995)
Catholic University of Rio de Janeiro

Research Interests

Empirical Issues in Finance and Financial Econometrics, including: Term Structure of Interest Rates; Stochastic Volatility Models; Credit Risk Models; Applications of Affine Processes in Finance.

Main Publications

1. “Decomposing and Simulating the Movements of Term Structures in Emerging Eurobond Markets”, *Journal of Fixed Income*, 1, 21-31, June, (1998). (with C. Fernandes and A. Duarte)

2. “Credit Spread Arbitrages in Emerging Eurobond Markets”, *Journal of Fixed Income*, 2, December, (2000). (with C. Fernandes and A. Duarte)

3. “A Generalization of PCA for Non-Observable Term Structures”, *International Journal of Theoretical and Applied Finance*, Vol. 6, 8, (2003). (with C. Fernandes and A. Duarte)

4. “Time-Varying Risk Premia in Emerging Markets: Explanation by a Multi-Factor Affine Term Structure Model”, *International Journal of Theoretical and Applied Finance*, Vol. 7, 7, (2004).

5. “Affine Processes, Arbitrage-Free Term Structures of Legendre Polynomials and Option Pricing”, *International Journal of Theoretical and Applied Finance*, Vol. 8, 2, (2005).

Working Papers

6. “Do Options Contain Information About Excess Bond Returns?”, November 2005. (with J. Graveline and S. Joslin)

7. “Extracting Default Probabilities and Recovery Values from Sovereign Bonds”, June 2006. (with B. Meres)

Work in Progress

8. “The Role of Fixed Income Options on the Risk Assessment of Bond Portfolios”, May 2006. (with J. Valentim)

9. “Pricing and Hedging Brazilian Fixed Income Options”, May 2006. (with J. Valentim)

10. “Some Empirical Implications on a Parametric Arbitrage-Free Term Structure Model”, March 2005.

11. “Regime Switching Models for Bond Yields and Credit Default Swaps”, June 2005. (with M. Akat and G. Papanicolaou)

12. “Pricing and Modeling Credit Derivatives”, February 2005. (with M. Akat and G. Papanicolaou)

13. “A Latent-Factor Approach to Identify the Market Price of Risk”, December 2005, (with M. Fernandes and H. Lopes)

Other Publications

14. ”Alocação de Carteiras com Risco de Credito”, *Brazilian Review of Finance*, December, (2003). (with R. Oliveira)

15. "Interest Rate Risk Measurement in the Brazilian Sovereign Market", *Estudos Economicos*, January, (2004). (with C. Fernandes and A. Duarte)

16. "Stochastic Volatility Models and Option Pricing in Brazilian Stock Markets: An Empirical Investigation", *Journal of Emerging Market Finance*, August 2005 (with S. Dana)

17. "A Note on the Relation Between Principal Components and Dynamic Factors in Affine Term Structure Models", *Brazilian Review of Econometrics*, May 2005.

Teaching Experience

Master level courses: Fixed Income Derivatives (IMPA, 2002), An Introduction to Fixed Income Instruments (IMPA, 2002 and IBMEC, 2001;2002;2005), Derivatives (IBMEC, 2002;2004;2005), Discrete Time Finance (IMPA, 2001), Matlab and Linear Algebra with Applications in Finance (IMPA, 2001), and Topics in Empirical Finance (IBMEC, 2005).

Undergraduate courses: Numerical Methods in Finance (IBMEC, 2004;2005).

MBA courses: Finance using EXCEL (IBMEC, 2004;2005) Portfolio Theory (IBMEC, 2005).

Seminars: Matlab for Finance Seminars I (Applications of Matlab in Finance, IBMEC-RJ 10/2001), II (Matrix Algebra and the Term Structure Estimation Problem, IBMEC-RJ 12/2001), and III (Applications of Matlab in Risk Management, IBMEC-RJ 05/2002).

Mini-Courses: Applications of Matlab in Finance (XXIII Meeting of the Brazilian Econometric Society, 12/2001), An Introduction to Fixed Income Markets (Second Meeting of the Brazilian Society of Finance, 07/2002), An Introduction to Affine Processes in Finance (IMPA-RJ, 07/2003), Market Risk (FURNAS, 11/2004).

Academic Awards

* Post-doctorate Fellowship 2002-2004, Department of Mathematics, Stanford University.

* Special PhD Fellowship 2000-2001, Fundação de Apoio a Pesquisa do Rio de Janeiro (FAPERJ, State Entity)

* PhD Fellowship 1998-1999, Coordenação de Aperfeiçoamento de Pessoal do Ensino Superior (CAPES, Brazilian Government)

* Master of Science Fellowship 1996-1998, Conselho Nacional de Desenvolvimento Cientifico e Tecnologico (CNPq, Brazilian Government)

* Fellowships for Undergraduate Studies, 1993-1995, IBM and Catholic University of Rio

Refereeing Journal of Emerging Markets Finance, Brazilian Review of Economics, Brazilian Review of Econometrics, Brazilian Review of Finance, Estudos Economicos, and Economia Aplicada

Recent Seminars

* American Finance Association Meeting, Chicago, USA, January 2007, (invited seminar to be presented).

* Bank of Canada Conference on Fixed Income Markets, Ottawa, Canada, May 2006, (co-author presentation).

* EPGE, FGV-RJ, Brazil, March 2006, (invited seminar).

* 27th Annual Meeting of the Brazilian Econometric Society, Natal, Brazil, December 2005.

* SAMSI Workshop on Financial Econometrics, North Carolina, USA, September 2005, (poster session).

* Northern Finance Association Meeting, Vancouver, Canada, September 2005, (co-author presentation).

* 11th Brazilian Time Series and Econometrics School, Vitoria, Brazil, August 2005.

* 25th Brazilian Colloquium of Mathematics, IMPA, Brazil, July 2005, (invited seminar).

* 5th Annual Meeting of the Brazilian Society of Finance, Sao Paulo, Brazil, July 2005.

* Department of Economics, UFSC, Brazil, June 2005, (invited seminar).

* Department of Economics, PUC-RJ, Brazil, May 2005, (invited seminar).

* IAPUC, PUC-RJ, Brazil, May 2005, (invited seminar).

* Department of Economics, Ibmec-SP, Brazil, April 2005, (invited seminar).

* EAESP, FGV-SP, Brazil, April 2005, (invited seminar).

* Risk Control / COPPEAD, Brazil, March 2005, (invited seminar).

* EPGE, FGV-RJ, Brazil, February 2005, (invited seminar).

Professional Experience

09/1999-08/2002 **Risk Manager**
JGP Hedge Fund, Rio de Janeiro, Brazil
Responsible for: Estimating and managing market risk; the performance evaluation of internal traders and investment funds; the quantitative area.

05/1997-05/1998 **Researcher**
Telecommunications Center, PUC-RJ, Rio de Janeiro, Brazil
Responsible for the implementation of a C++ program to calculate interference in a point multi-point transmission system.

10/1996-09/1997 **Fixed Income Quantitative Analyst**
Banco Pactual Bank, Rio de Janeiro, Brazil
Responsible for the implementation of models for pricing and hedging Brady Bonds, Eurobonds, and fixed income options.

Computational Skills

Matlab, C, Visual Basic, Excel, and SQL.