

Lorenzo Naranjo

Department of Finance
Leonard N. Stern School of Business
New York University
44 West 4th Street, Suite 9-197
New York, NY 10012

Phone: +1-212-998-0433
Cellphone: +1-917-806-1222
Fax: +1-212-995-4233
Email: lnaranjo@stern.nyu.edu
Web: <http://www.stern.nyu.edu/~lnaranjo>

Education

Ph.D. in Finance, *May 2009 (Expected)*
Leonard N. Stern School of Business, New York University

M.Phil. in Finance, *2008*
Leonard N. Stern School of Business, New York University

M.Sc. in Industrial Engineering, *2002*
Pontificia Universidad Católica de Chile

B.Eng. in Industrial and Electrical Engineering, *1999*
Pontificia Universidad Católica de Chile

Research Interests

Asset Pricing, Derivatives, Fixed-Income Markets, Commodities Markets

Job Market Paper

“Implied Interest Rates in a Market with Frictions”

There are many proxies for the short-term interest rate that are used in asset pricing. Yet, they behave differently, especially in periods of economic stress. Derivative markets offer a unique laboratory to extract a short-term borrowing and lending rate available to all investors that is relatively free from liquidity and credit effects. Interestingly, implied interest rates do not resemble benchmark interest rates such as the three-month T-bill rate or LIBOR, but instead are much more volatile. I argue that the volatility in the implied short-term rate in futures and option markets is due to frictions arising from borrowing and short-selling costs. I derive an equilibrium model of the futures market where demand imbalances from traders affect the implied interest rate. In the model, the implied interest rate depends on the “true” risk-free rate and a latent demand factor. I estimate the model based on S&P 500 index futures using the Kalman filter. The risk-free rate that results from this estimation has time-series properties similar to Treasury and LIBOR rates, and anticipates interest rate changes. The spread between the risk-free and the T-bill rate correlates with liquidity proxies of the Treasury market, while the spread between LIBOR and the risk-free rate is related to economic distress. The latent demand factor is closely related to proxies for demand pressure in the futures market, such as large speculator positions as well as investor sentiment. The demand factor is positive (negative) when buying (selling) pressure is high and is difficult to borrow (to short-sell the underlying). I also find that demand imbalances are correlated across different indexes, for both futures and options.

Publications

“An N-Factor Gaussian Model of Oil Futures Prices” (with Gonzalo Cortazar), *Journal of Futures Markets*, 2006, 26 (3), pp. 243–268

“Term-Structure Estimation in Markets with Infrequent Trading” (with Gonzalo Cortazar and Eduardo Schwartz), *International Journal of Finance & Economics*, 2007, 12(4), pp. 353–369

Work in Progress

“Momentum and the Acceleration Hypothesis” (with Stephen Brown)

Honors and Awards

Jules I. Bogen Fellowship, NYU Stern School of Business, 2008–2009.

NYU Stern School of Business Fellowship, 2004–2008.

Department of Industrial Engineering Award, Pontificia Universidad Católica de Chile, 2002.

Scholarship for Academic Excellence, Pontificia Universidad Católica de Chile, Awarded Twice in 1994 and 1995.

Teaching Experience

Instructor, Financial Management (Undergraduate), *Summer 2007*

Stern Undergraduate College, New York University

Topics Covered: Capital Budgeting; Debt, Equity and Firm Valuation; Capital Structure.

Overall Teaching Rating: 6.6 out of 7.0.

Teaching Assistant, Advanced Futures and Options (MBA), *Fall 2006*

Stern School of Business, New York University

Prof. Marti Subrahmanyam

Instructor, Workshop on Applied Finance (Undergraduate), *Spring 2004*

School of Engineering, Pontificia Universidad Católica de Chile

Topics Covered: Fixed Income Strategies, Term Structure Estimation.

Teaching Assistant, Rational Pricing of Internet Companies and High-Tech Projects, *May 2001*

Amsterdam Institute of Finance

Prof. Eduardo Schwartz

Refereeing

Energy Economics; Journal of Business, Finance and Accounting; Journal of Derivatives; Journal of Empirical Finance; Journal of Futures Markets; Quantitative Finance

Languages

Fluent in English, French and Spanish (Native)

Non-Academic Experience

Manager, 2001–2004

RiskAmerica.com, a website that provides information to Chilean financial market participants.

Researcher, 2000–2001

Cortazar & Schwartz Financial Research and Consulting

References

Prof. Marti G. Subrahmanyam (Chair)

Leonard N. Stern School of Business
New York University
44 West 4th Street, Suite 9-190
New York, NY 10012
Email: msubrahm@stern.nyu.edu
Phone: +1-212-998-0348

Prof. Stephen J. Brown

Leonard N. Stern School of Business
New York University
44 West 4th Street, Suite 9-190
New York, NY 10012
Email: sbrown@stern.nyu.edu
Phone: +1-212-998-0306

Prof. Stijn Van Nieuwerburgh

Leonard N. Stern School of Business
New York University
44 West 4th Street, Suite 9-190
New York, NY 10012
Email: svnieuwe@stern.nyu.edu
Phone: +1-212-998-0673

Prof. Menachem Brenner

Leonard N. Stern School of Business
New York University
44 West 4th Street, Suite 9-190
New York, NY 10012
Email: mbrenner@stern.nyu.edu
Phone: +1-212-998-0323

Prof. Joel Hasbrouck

Leonard N. Stern School of Business
New York University
44 West 4th Street, Suite 9-190
New York, NY 10012
Email: jhasbrou@stern.nyu.edu
Phone: +1-212-998-0310

November, 2008