The variance risk premium represents the compensation paid to index option sellers for the risk of losses following upward movements in realized market return volatility. Common wisdom connects these spikes with elevated uncertainty on economic fundamentals. I incorporate this link within a single-agent general equilibrium model, embedding real-time learning on state variables and parameters. I show that infrequent, large and relatively transitory macroeconomic uncertainty shocks produce a sizable and volatile variance risk premium. These shocks coincide with major events such as the LTCM/Russian crisis, the onset of the second Gulf War, and the great financial crisis of 2008-2009. I compute macroeconomic uncertainty as the dispersion of the agent’s belief about the expected growth rate of consumption. Its time-varying nature reflects in the variance risk premium, generating short-term predictability for market excess returns, consistent with the data. In addition, the model matches the higher order moments of the realized equity premium, with a reasonably low level of relative risk aversion equal to five.
Macroeconomic Factors Strike Back: A Bayesian Change-Point Model of Time-Varying Risk Exposures and Premia in the U.S. Cross-Section
(with Massimo Guidolin and Francesco Ravazzolo)

Under review at: Journal of Business and Economic Statistics

Conventional wisdom and most of asset pricing research argues that macroeconomic factors can hardly explain the dynamics of asset valuations for U.S. stock and bond portfolios. Such a disconnect clashes with a body of theoretical work that shows that on average, excess returns (risk premia) should be driven by macroeconomic forces. We reconcile this puzzle by proposing and estimating a flexible asset pricing model in which both risk exposures and risk premia are time-varying and effectively explain the cross-section of U.S. stock and bond returns.

Dissecting the 2007-2009 Real Estate Market Bust: Systematic Pricing Correction or Just a Housing Fad?
(with Massimo Guidolin and Francesco Ravazzolo)

During 2009 and 2010, a number of commentators have emphasized that the non-residential real estate market had suffered from a fall-out from the sub-prime crisis, but it had not bled as deeply as the residential/housing segment. We investigate whether this differential dynamics comes from a heterogeneous evolution of risk exposures across real estate segments, and whether this corresponds to a correction of pervasive mispricing that had endogenously emerged in the residential sector but that had not occurred in the non-residential segment of the U.S. real estate market.

Structural Uncertainty and Higher Moments of Asset Returns

Existing asset pricing research posits an apparent lack of close connection between higher moments of market returns and the smooth dynamics of economic fundamentals. I show in this paper that, such a puzzling disconnect may be explained by the compounding effect of real-time learning about the structure of the economy and time-varying macroeconomic risk.

Risk Assessment in Large Portfolios: Why Imposing the Wrong Constraints Hurts
(with Carlos M. Carvalho)

Extending the Black-Litterman Portfolio Allocation Strategy
(with Carlos M. Carvalho)

Can Linear Predictability Models Time Bull and Bear Real Estate Markets? Out-of-Sample Evidence from REIT Portfolios,
(with Massimo Guidolin)
forthcoming in the Journal of Real Estate Finance and Economics

Can Long-Run Dynamic Optimal Strategies Outperform Fixed-Mix Portfolios? Evidence from Multiple Data Sets”,
(with Massimo Guidolin)
conditionally accepted in the European Journal of Operational Research

Instructor
Financial Econometrics and Empirical Finance, II (Graduate)
Matlab course

Spring 2013

Teaching Assistant
Financial Econometrics and Empirical Finance, II (Graduate)
Theory of Finance (Graduate)
Financial Econometrics and Empirical Finance, I (Graduate)

Fall 2011
PROFESSIONAL ACTIVITIES

Conferences and Seminars (* Presentation by co-author)

European Economic Association, American Economic Association*, 2013
ESOBE, World Finance Conference, CFE London (Scheduled, Invited),
Bocconi Lunch Seminar, Vienna IHS Time-Series Workshop

CFE Oviedo (Invited), Bocconi Lunch Seminar,
McCombs Lunch Seminar

Bocconi Lunch Seminar, CFE London (Invited),
McCombs Lunch Seminar

Referee (ad-hoc)

Journal of Empirical Finance, International Journal of Forecasting,
Computational Economics, Quarterly Review of Economics and Finance

GRANTS, SCHOLARSHIPS AND AWARDS

Bocconi University, Honors Prize, PhD School 2013
Journal of Applied Econometrics, ESOBE Travel Grant 2013
Bocconi University, Dissertation Completion Fellowship 2012-2013
Bocconi University, PhD Fellowship 2008-2012
Bocconi University, Honors Prize, PhD School 2009
Insubria University, Merit Scholarship 2007
CCIAA Scholarship 2007

OTHER EMPLOYMENT

Ernst & Young, Global Finance Risk Management, Milan 2008
(Analyst, OTC Derivatives)