

# Attilio Meucci

[www.symmys.com](http://www.symmys.com)

- 
- Lead design and implementation of advanced risk management and portfolio construction systems
  - Well-published researcher in the fields of financial statistics, risk and portfolio construction
  - Professor at top graduate programs in quantitative finance
  - PhD in Mathematics, CFA certification, MA in Economics, BA summa cum laude in Physics
  - Fluent in six languages
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## Work Experience

**Kepos Capital LP**, New York

*Jul 2010 - present*

### Chief Risk Officer

- Risk management / portfolio construction

**Bloomberg LP - ALPHA** (portfolio analytics and risk), New York

*Aug 2008 – Jun 2010*

### Head of Research

- Led team of researchers to build an analytical platform for performance attribution, risk management, and portfolio optimization across all asset classes and regions
- Sole inventor of: *Factors on Demand*, multi-asset-class return decomposition framework to attain higher estimation power, empirical accuracy, theoretical consistency and flexibility than standard systematic-plus-idiosyncratic approaches; *Fully Flexible Views*, advanced portfolio construction and stress-testing technique for non-normal markets with views/stress test of means, medians, volatilities, copulas, VaR, CVaR, ranking, etc.; *Diversification Management*, conditional PCA/entropy methodology to quantify numbers of independent bets and optimize portfolios accordingly
- Creator and editor of Bloomberg Quantitative Education and Research Paper Series on ssrn.com

**Lehman Brothers - POINT** (portfolio analytics and risk), New York

*Mar 2005 - Jun 2008*

### Senior Vice President

- Sole inventor (patent pending) of Lehman Brothers' *Scenario-Based Global Risk Model* to compute p&l distribution of fixed income, credit, mortgages, equities, FX and derivatives portfolios
- Designed quantitative investment banking models: risk-adjusted optimal financing strategies, risk-adjusted M&A balance-sheet optimization, best strategic hedges for commodities/inflation
- Designed risk and portfolio management models: Black-Litterman/copula opinion pooling; three-step multi-moment optimization heuristics with transaction costs; flexible risk attribution, no-Greek hedging, tail-risk estimation, pseudo-idiosyncratic residual aggregation
- Coached analytics team to implement the above models
- Advised and educated clients: executive trainings, publications, presentations

**Relative Value International** (hedge fund), Greenwich CT

*Jul 2002 - Aug 2004*

### Quantitative Analyst/Trader

- Equities: triplets within dynamical clusters
- Treasury basis: PCA-based cheap/rich scenario cube with mean-reverting third factor
- Eurodollar and forward swap curve: robust cointegration-based alpha
- Traded S&P '500 equity pairs and eurodollar curve roll-down/macro-adjusted statistical arbitrage

**Bain & Company** (strategic consulting), Milan

*Jul 1999 - Jun 2002*

### Vice President

- Designed quantitative financial models for: tactical allocation, strategic allocation, style analysis, market and credit risk management, personal financial planning, portfolio insurance
- Coached teams to implement the above models as stand-alone software applications: Excel user interface, MATLAB computational core, VBA connections
- Educated client's top management (CEO's, CFO's, heads of quants)

## Academic Appointments

- **Baruch College**, CUNY, M. Fin. Eng - *Adjunct Professor* Summer 2009 - present
- **New York University**, Courant Institute M Math. Fin. - *Adjunct Professor* Spring 2005 - Fall 2008
- **Columbia University**, New York, IEOR, M. Fin. Eng. - *Adjunct Professor* Spring 2007
- **University of Pavia**, M. Appl. Econometrics - *Adjunct Professor* Spring 2002
- **Bocconi University**, Milan, M. Econ. - *Adjunct Professor* Fall 1999 - Spring 2002
- **CEIBS**, Shanghai, MBA - *Adjunct Professor* Fall 2001
- **U.C. Berkeley**, Mathematics Dept. - *Visiting Scholar* Fall 1995 - Spring 1997
- **University of Milan**, Physics Dept. - *Teaching Assistant* Fall 1994 - Spring 1995

## Executive Teaching

Sole instructor of multi-day quantitative bootcamp “Advanced Risk and Portfolio Management“

- **Baruch College - CUNY**, New York Aug 16-21 2010
- **Baruch College - CUNY**, New York Aug 17-22 2009
- **Courant Institute - NYU**, New York Jun 26-28 2008
- **Mathfinance**, Frankfurt Jun 4-6 2008
- **Brazilian Mercantile and Futures Exchange**, Sao Paulo Mar 12-14 2008
- **Lehman Brothers**, London Jun 12-13 2007
- **Mathfinance**, Frankfurt Mar 24-25 2007
- **Politecnico di Milano**, Milan Mar 8-10 2007
- **Instituto Nacional de Matematica Pura e Aplicada**, Rio de Janeiro Jan 6-7 2007
- **Salvo International**, Singapore Aug 28-29 2006
- **Bank of Italy**, Rome (with P. Veronesi and U. Cherubini) Jun 6-8 2006
- **Imperial College**, London May 30-31 2006
- **Bocconi University**, Milan Mar 13-17 2006

## Education

- **CFA**, CFA Institute 2003
- **PhD** Mathematics, University of Milan 1999
- **MA** Economics, Bocconi University 1999
- **BA** Physics *summa cum laude*, University of Milan 1994

## Languages

◆◆◆◆: near native    ◆◆◆: fluent    ◆◆: proficient    ◆: basic knowledge

- English: ◆◆◆◆
- French: ◆◆◆ - Centre Culturel Francais<sup>1</sup>, DALF<sup>2</sup>
- German: ◆◆◆ - Goethe Institut<sup>1</sup>, GDS<sup>2</sup>
- Italian: ◆◆◆◆
- Spanish: ◆◆◆ - Instituto Cervantes<sup>1</sup>, DELES<sup>2</sup>
- Mandarin Chinese: ◆◆◆
- Modern Greek: ◆◆

<sup>1</sup> Sole official institution    <sup>2</sup> Certificate of highest proficiency

## Additional

- Co-director - GARP Chapter at Baruch College
- Board member - Society of Quantitative Analysts, New York

## Publications

### Books & monographs

- “Risk and Asset Allocation”, *Springer Quantitative Finance* (2005)
- “Mr. Risk: Getting to Know Him Better”, *EGEA - Bocconi University Press* (2002)
- “Introducing Mr.Risk”, *EGEA - Bocconi University Press* (2001)

### Articles in peer-reviewed journals

- Bi-monthly column “The Quant Classroom”, *Risk Professional Magazine - GARP*
  - *Annualization and General Projection of Skewness, Kurtosis and All Summary Statistics* (Aug 2010, 59-63)
  - *Common Misconceptions on the “Beta”: Hedging, Estimation, and Horizon Effects* (Jun 2010, 42-46)
  - *Linear vs. Compounded Returns: Common pitfalls in Portfolio Management* (Apr 2010, 49-50)
  - *How to Visualize Risk: Square-Root Rule, Covariances and Ellipsoids* (Feb 2010, 52-53)
- “Factors on Demand”, *Risk*, **23**, 7, 84-89 (2010)
- “Simulations with Exact Means and Covariances”, *Risk*, **22**, 7, 89-91 (2009)
- “Enhancing the Black-Litterman and Related Approaches: Views and Stress-Test on Risk Factors”, *Journal of Asset Management*, **10**, 2, 89-96 (2009)
- “Managing Diversification”, *Risk*, **22**, 5, 74-79 (2009)
- “Fully Flexible Views: Theory and Practice”, *Risk*, **21**, 10, 97-102 (2008)
- “Pricing Discretely Monitored Asian Options under Levy Processes”, with G.Fusai, *Journal of Banking and Finance*, **32**, 2076-2088 (2008)
- “Risk Contributions from Generic User-Defined Factors”, *Risk*, **20**, 6, 84-88 (2007)
- “Beyond Black-Litterman in Practice: a Five-Step Recipe to Input Views on Non-Normal Markets”, *Risk*, **19**, 9, 114-119 (2006)
- “Beyond Black-Litterman: Views on Non-Normal Markets”, *Risk*, **19**, 2, 87-92 (2006)
- “Broadening Horizons”, *Risk*, **17**, 12, 98-101 (2004)
- “Pitfalls in Linear Models for Style Analysis”, with F.Corielli, *Statistical Methods and Applications*, **13**, 1, 105-129 (2004)
- “Assessing Views”, with G.Fusai, *Risk*, **16**, 3, S18-S21 (2003)
- “A Common Pitfall in Mean-Variance Asset Allocation”, *Wilmott* (2001)

### Articles in volumes

- “The Black-Litterman Approach: Original Model and Extensions”, *Encyclopedia of Quantitative Finance*, Wiley (2010)
- “Portfolio Management”, *IncisiveMedia* (2008), 5 out of 15 contributions in 15-author volume
- “Multi-period Optimal Asset Allocation for a Multi-Currency Hedged Portfolio”, with D.Mignacca, *Computational Methods in Decision-Making, Economics and Finance*, Kluwer, 1-12 (2002)

### Mathematical Physics

- “Toda Equations, bi-Hamiltonian Systems, and Compatible Lie Algebroids”, *Mathematical Physics, Analysis and Geometry*, **4**, 131-146 (2001)
- “Compatible Lie Algebroids and Periodic Toda Lattice”, *J. of Geometry and Physics*, **35**, 273-287 (2000)
- “The bi-Hamiltonian Route to the Discrete Sato Grassmannian”, *Ph.D. dissertation, Univ. Milan* (1998)
- “A Generalization of Arnold Diffusion in Hamiltonian Systems”, *honor thesis, Univ. Milan* (1994)