

# FALL JOIM CONFERENCE SERIES OCTOBER 5–7, 2008 RITZ CARLTON, BOSTON, MASSACHUSETTS CONFERENCE SUMMARIES



The program emphasized the topics Hedge Funds and Risk Management.

Robert C. Merton

Harvard Business School

Keynote Speaker

Special guest: Paul Samuelson

Massachusetts Institute of Technology

Clifford S. Asness

AQR Capital Management, LLC

"Value and Momentum Everywhere"

Discussant: Richard Michaud

New Frontier Advisors

We study jointly the returns to value and momentum strategies for individual stocks within countries, stock indices across countries, government bonds across countries, currencies, and commodities. Value and momentum generate abnormal returns everywhere we look. Exploring their common factor structure across asset classes, we find that value (momentum) in one asset class is positively correlated with value (momentum) in other asset classes, and value and momentum are negatively correlated within and across asset classes. Long-run

consumption risk is positively linked to both value and momentum, as is global recession risk to a lesser extent, while global liquidity risk is related positively to value and negatively to momentum. These patterns emerge from the power of examining value and momentum everywhere at once and are not easily detectable when examining each asset class in isolation.

# Craig French

Corbin Capital Partners, L.P.

"The Tail that Wags the Hedge Fund Dog"

Discussant: James D. Peterson Charles Schwab & Co., Inc

We consider a portfolio of hedge funds as a portfolio of insurance policies against a set of risk factors. We highlight some deficiencies of linear estimation procedures and apply several nonlinear approaches to an individual hedge fund and also to a set of investable hedge fund indices. We apply Extreme Value Theory to the estimation of hedge funds tail risk. We find that although some hedge fund indices may apparently be well-fit by short-, medium-, and long-tailed classes of Generalized Extreme Value

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(GEV) distributions, in practice it is more conservative to use the long-tailed class of GEV for which statistically significant goodness-of-fit may be attained. In particular we find that, examining the monthly returns of 12 HFRX investable hedge fund indexes over the ten-year period from January 1998 through December 2007, seven indexes are well-fit by long-tailed distributions including the generalized Pareto and the Cauchy, while five indexes are well-fit by the medium-tailed Gamma distribution. Care should be taken because seven of the twelve indexes also appear to be well-fit by the normal distribution, and we caution that for purposes of tail-risk estimation, acceptance of the normal distribution would prove illusory and hazardous.

# Nikunj Kapadia

University of Massachusetts, Amherst
"Limited Arbitrage between Equity and Credit
Markets"

Discussant: Jason P. Kremer

MSCI Barra

Why do equity and credit markets appear to behave as if they are not integrated? We examine whether limits to arbitrage help explain why equity and credit markets are not highly correlated. We find that the cross-sectional variation in the level of integration between the equity and the credit default swap market is related to proxies for informational sensitivity, liquidity, and idiosyncratic risk. Equity and credit markets are more integrated when a firm's securities are more informationally sensitive, are more liquid and have lower idiosyncratic risk.

## **Bing Liang**

University of Massachusetts, Amherst "Operational Risk for Hedge Fund" Discussant: Sharon Hill

Discussant: Sharon Hill Delaware Investments

Mandatory disclosure is a regulatory tool intended to allow market participants to assess manager risks without constraining manager actions. We use the recent controversial and ultimately unsuccessful SEC attempt to increase hedge fund disclosure to examine the value of disclosure to investors. By examining SEC mandated disclosures filed by a large number of hedge funds in February 2006, we are able to construct a measure of operational risk distinct from market risk. Leverage and ownership structures as of December 2005 suggest that lenders and hedge fund equity investors were already aware of hedge fund operational risk characteristics. However, operational risk does not mediate the flow-performance relationship, suggesting that investors either lack this information, or they do not regard it as material. Our operational risk measure called the omega score can be used to predict hedge fund failures.

### Andrew W. Lo

Massachusetts Institute of Technology "Impossible Frontiers"
Discussant: Sanjiv R. Das

Santa Clara University

A key result of the Capital Asset Pricing Model (CAPM) is that the market portfolio the portfolio of all assets in which each asset's weight is proportional to its total market capitalization lies on the mean-variance efficient frontier, the set of portfolios having mean-variance characteristics that cannot be improved upon. Therefore, the CAPM cannot be consistent with efficient frontiers for which every frontier portfolio has at least one negative weight or short position. We call such efficient frontiers "impossible," and derive conditions on asset-return means, variances, and covariances that yield impossible frontiers. With the exception of the two-asset case, we show that impossible frontiers are difficult to avoid.

Moreover, as the number of assets *n* grows, we prove that the probability that a generically chosen frontier is impossible tends to one at a geometric rate. In fact, for one natural class of distributions, nearly

one-eighth of all assets on a frontier is expected to have negative weights for every portfolio on the frontier. We also show that the expected minimum amount of shortselling across frontier portfolios grows linearly with n, and even when shortsales are constrained to some finite level, an impossible frontier remains impossible. Using daily and monthly US stock returns, we document the impossibility of efficient frontiers in the data.

# Gregory B. van Inwegen

Ivy Asset Management

"Risk Management in a Non Transparent World: Perspective from a Fund of Hedge Funds"

Discussant: Sebastien Page State Street Associates

This discussion will offer a look at the issue of market risk management from the perspective of a risk manager at a fund of hedge funds. Unlike a bank or hedge fund, a risk manager at a fund-of-funds has varied (and usually limited) access to position types and sizing with respective to their investments at hedge funds. The information available comes in a wide array of frustratingly nonstandardized

aggregate level reports, ranging from full position level data (perhaps at a lag) to a single leverage number only. On average there is some level of aggregated sector exposure data or fund level greeks provided. However, the only common denominator is times series performance data (and even that can be limited). A confounding problem underlying securities have nonlinear pay-offs and performance distributions a non-normally distributed. This discussion will detail the various approaches taken address these issues:

- Non-Normal Risk Budgeting.
- Multi-Factor Risk Modeling & Stress Testing.
- Methods for working with Truncated Times Series.
- Simulations based on Sector Exposures, Yield Curve Sensitivities, and Greeks.
- Measuring and Adjusting for Illiquidity.

The Spring 2009 Conference will be held in San Francisco, California, March 8–10 at the newly renovated Stanford Court, Renaissance Hotel. The program will emphasize the topics Liquidity and Leverage.