

8:00 AM Conference Registration

9:00 AM **Welcome & Opening Remarks**

9:30 AM **Keynote Presentation**
Kurt Winkelmann, *Managing Director & Head of Risk & Analytical Research*

Track 1

Track 2

Track 3

10:00 AM **Innovations in Equity Factor Risk Modeling**

We present recent innovations that form the basis for the next generation of Barra equity risk model methodology. For instance, we demonstrate the advantages of including a country factor in single-country risk models, and discuss the intuitive interpretation of these country factors. We also describe cross-sectional techniques to estimate both factor and specific volatility. Finally, we discuss underestimation of risk for optimized portfolios, and present a methodology for adjusting the factor covariance matrix to account for such biases.

Extreme Drawdown

Margin calls, liquidity policies and fear prompt investors to sell underpriced securities in the wake of a severe drawdown. We present xDrawdown, the latest enhancement to Barra Extreme Risk, which is a path-dependent risk measure that incorporates empirical features of the market, including heavy tails, skew, memory and volatility clustering. Using a style-based investment strategy, we show that a side-by-side analysis of volatility and xDrawdown provides insights that cannot be obtained through the lens of a single risk measure.

Liquidity Risk

The recent financial crisis vividly demonstrated the need to manage liquidity risk. We present a framework for analyzing the market liquidity risk of a portfolio that may include a broad range of instruments, which requires measuring the liquidity of all assets in a common way. We illustrate our modeling approach on various asset types. We explore portfolio analytics based on this liquidity framework with the aim to answer many fundamental concerns in liquidity risk management.

11:00 AM Morning Break

11:20 AM **Modeling Risk with Stochastic Drivers**

The side-by-side use of multiple risk modeling approaches can protect against biased risk management. In contrast to the Barra fundamental factor approach, the statistical approach identifies drivers of portfolio risk from the past return history without pre-specified factor exposures. We present a novel risk model framework that substantially refines the statistical approach and avoids the drawbacks of traditional Principal Component Analysis (PCA)-based models.

Multi-Asset-Class Risk Modeling

We present the new Barra Integrated Model (BIM301), a multi-asset class risk model spanning global stocks, bonds, currencies, commodities, hedge funds, private real estate and volatility futures. The combination of global factors with detailed local models results in a robust and intuitive model with insight into the structure of the world's markets.

Hedge Fund Transparency – Merits of a Position-Based Approach

We begin with a survey of the questions that hedge fund investors ask of their managers, with particular emphasis on risk monitoring on an ongoing basis. Though hedge fund investors typically operate with a relatively long investment horizon, the trend is toward more proactive engagement with managers, and providing more timely risk information. We demonstrate the relative merits of return-based and position-based approaches to risk information, drawing on examples of individual funds as well as depictions of the overall hedge fund universe.

12:15 PM Lunch

1:30 PM Risk Model Error and Portfolio Construction

All risk models are subject to estimation error. We analyze the impact of risk model errors in portfolio construction and how that impact depends on the nature of each risk model. We present MSCI's new eigenfactor methodology and its effectiveness in mitigating risk forecast bias in optimized portfolios.

Issuer Specific Risk for Fixed Income Factor Models

Specific risk is meant to capture the fully diversifiable component of portfolio risk, in contrast to systematic risk that is shared among different assets. We examine the market characteristics and review treatments of specific risk, including specific risk as a measure of credit transition and default risk. We present a model based on issuer returns residual to interest rates and sector spreads, and discuss its characteristics as a model of diversifiable asset risk. Finally, we show historical behavior of the specific versus systematic drivers of return and risk in fixed income.

Advances in Fixed Income Performance Attribution

The objective of performance attribution is to explain the sources of active return by quantifying the impact of active management decisions. An insightful analysis requires identifying the drivers of security return over a given investment horizon (including derivative securities), aggregating systematic drivers to the portfolio level, as well as accounting for the impact of intra-period transactions, then accurately linking these effects in a residual-free fashion across time. We survey these key considerations and highlight our methodological advances.

2:30PM Anatomy of a Crisis

The last decade was a period of volatile market conditions, culminating in the financial crisis of 2008 and the global recession of 2009. We present the performance of different asset classes, markets, and factors during the recent financial crisis and the subsequent market recovery, assessing which markets and factors experienced the most extreme performance during this cycle. Can risk models and portfolio analytics provide early warning signs as a crisis develops? Can models be used to protect portfolios from increases in volatility and extreme returns as a crisis unfolds? Which markets and factors provided effective hedges during the recent crisis and which ones provided outperformance opportunities during the subsequent recovery?

Modeling Commodity Risk

We present approaches to forecast commodity risk along the term structure. Often the Samuelson effect (the rise in volatility of a futures contract as it approaches maturity) is captured by relying on a constant maturity framework, while inter-contract risks are best dealt with by a more direct approach. We compare the risk forecasting performance on a number of commonly traded contracts and spreads using a variety of models, including constant maturity futures, constant maturity returns, time series of fixed expiration contracts and a factor model.

Empirical Evidence on the Asset Correlation Values (AVCs) for the Incremental Risk Charge (IRC) Model

We explore the issue of empirically calibrating Asset Value Correlations (AVCs) for a portfolio of traded assets exposed to credit risk within the context of the Incremental Risk Charge (Basel Committee on Banking Supervision, 2009). Following the Creditmetrics™ approach on a sample of European listed firms, we estimate the “systematic” portion of return variation of each company. Then we estimate for the same sample the relation between the estimated R2 coefficients and two proxies of company size: the book asset value and the turnover. Lastly, we provide empirical evidence on the absolute level of Asset Value Correlations (AVCs) and on the assumption of an inverse relation between Probabilities of Defaults (PDs) and AVCs. We conclude by showing the “Asset Correlation Washout” effect in the multi-period IRC framework caused by different Liquidity Horizons under the “Constant Level of Risk” principle.

3:25 PM Afternoon Break**3:45 PM Actionable Constraint Analysis**

Constraints used in mean-variance optimization may prevent managers from getting the most out of their return forecasts in portfolio construction. While analytics for assessing the impact of constraints on risk and return exist, many do not clearly point to steps that managers may take to adjust their portfolios. We present new, actionable analytics that quantify the impact of constraints, illustrating how to measure the changes of risk, return and information ratio when relaxing each constraint. Our examples show the benefits and limitations of constraint analysis.

Stress-Testing Using Macroeconomic Scenarios

A major consequence of the global financial crisis was a broad re-assessment of credit risk. Through a number of scenarios, we illustrate how to construct a top-down, macro-inspired stress test focusing on credit risk. For Europe, we focus on the example of sovereign distress. Starting with a sovereign event, we discuss the possibilities for contagion, and examine the market factors expected to show stress behavior. For the US, we pursue a similar exercise focusing on state debt.

Counterparty Risk Management: History, Models and Regulation

Counterparty risk management has evolved significantly: from a reserves-based notion of risk used by only the largest banks some decades ago, to a markets-based, Credit Valuation Adjustment (CVA)-driven approach that many institutions use today. At the same time, regulations governing counterparty risk have become more complex, with no fewer than five different capital charges for counterparty exposures under Basel III. To make sense of this evolving area, we present a historical perspective of counterparty risk management practice, and discuss both modeling challenges and regulatory evolution in this historical context.

4:45 PM Closing Remarks**5:00 PM Cocktail Reception**