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Don't Miss Insights From These Brand New Speakers In 2011



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The ICBI Global Derivatives 2nd Annual High Frequency Finance & Algorithmic Trading Summit







Designing & Implementing Effective Trading Algorithms In The New Market & Regulatory Environment

Monday 11 April 2011

08.30	Registration & Welcome Coffee
08.55	Chairman's Opening Remarks
OPENING KEYNOTE ADDRESS	
09.00	<p>Exploring The Latest Approaches To Building Robust Volatility Models Of High Frequency Data</p> <p>Marco Avellaneda, Professor Of Mathematics, COURANT INSTITUTE OF MATHEMATICAL SCIENCES, NEW YORK UNIVERSITY & Partner, FINANCE CONCEPTS</p> <p>Marco Avellaneda has been involved in teaching, developing and practicing quantitative finance for the last 15 years. He worked at Banque Indosuez as consultant in FX derivatives, as a vice-president in fixed-income research at Morgan Stanley, as quant strategist at option marketmaking firm Gargyley Strategic Investments, as Head of Volatility Arbitrage at the hedge fund Capital Fund Management where he created the first volatility fund, and as Portfolio Manager for quant trading at the Galileo Group. His interests are unabashedly focused on quantitative alpha generation. He is known in academic finance as the inventor of the Uncertain Volatility model, for developing model-calibration algorithms using Weighted Monte Carlo/Max Entropy, for the theory behind dispersion trading, and for his more recent works on statistical arbitrage in the US equities market, high-frequency trading and price forecasting. A faculty member at the Courant Institute, he teaches classes in Stochastic Calculus, Risk-management and Portfolio Theory (non-orthodox, yes?), PDEs in finance and Quantitative Investment Strategies. He is in the editorial boards of Communications on Pure and Applied Mathematics (the pure maths rock!), the International Journal for Theoretical and Applied Finance and Quantitative Finance, among others and authored the textbook "Quantitative Modeling of Derivative Securities". He was awarded the prize 2010 Quant of the Year by RISK Magazine.</p>
HIGH FREQUENCY FINANCE THINKTANK SESSION	
09.40	<p>Where Next For High Frequency Finance? New Asset Classes, New Markets, & New Methodologies</p> <p>Robert Almgren, Co-Founder, QUANTITATIVE BROKERS</p> <p>Robert Almgren is also a Fellow in the Mathematics in Finance Program at New York University. Until 2008, Dr Almgren was a Managing Director and Head of Quantitative Strategies in the Electronic Trading Services group of Bank of America Securities. From 2000-2005, he was a tenured Associate Professor of Mathematics and Computer Science at the University of Toronto, and Director of its Master of Mathematical Finance program.</p> <p>Richard Olsen, Founder, OANDA</p> <p>Richard Olsen is an economic researcher in high frequency finance. He is co-founder of OANDA, a market maker and information source for currency, is chief executive of Olsen Ltd, an investment manager, and visiting professor at the Centre for Computational Finance and Economic Agents at the University of Essex.</p> <p>Peter van Kleef, Partner, LAKEVIEW CAPITAL MARKET SERVICES</p> <p>Prior to his role at Lakeview, Peter managed significant hedge fund type investment portfolios and quantitative trading departments for among others Cooper Neff, Salomon Brothers, HypoReisbank and Credit Lyonnais. He has over 15 years of experience in the development and running of sophisticated automated trading operations.</p>
10.20	Audience Q&A & Round Up
10.30	Morning Coffee
MOVING BEYOND EQUITIES	
11.00	<p>How Can Algorithmic Trading Establish Itself Across Asset Classes</p> <p>Robert Almgren, Co-Founder, QUANTITATIVE BROKERS</p>
CONSTRUCTING NEW ALGORITHMS	
11.40	<p>Advanced Algorithmic Strategies: Order Book & News Based Strategy Design & Implementation</p> <p>Peter van Kleef, Partner, LAKEVIEW CAPITAL MARKET SERVICES</p>
12.20	<p>Graphical Insights Into Market Liquidity, Volatility & Effects Of Correlations</p> <p>Ali Hirs, Head Of Analytical Trading Strategy, NATIXIS CASPIAN CAPITAL MANAGEMENT</p> <p>Ali Hirs is Head of Analytical Trading Strategy at Natixis Caspian Capital Management, LLC. He worked at Morgan Stanley, Bank of America Securities, and Prudential Securities. He is also an adjunct professor at Columbia University and Courant Institute.</p>
13.00	Audience Q&A & Round Up
13.10	Networking Lunch - Plus Sign Up For The 'Meet The Speaker' Lunch Tables
14.20	<p>Integrating Boundaries: A Systematic Approach To Automated Cross Asset, Multi Frequency Trading</p> <p>Mark Holt, Head Of Implementation, Systematic Trading Group BLUECREST CAPITAL MANAGEMENT LLP</p> <p>Mark Holt is Head of Implementation for the systematic trading group at BlueCrest Capital Management LLP. He has spent the last 15 years automating trading within and between major financial institutions. Joined BlueCrest after 5 years at UBS where he was responsible for the architecture and development of their European algorithmic trading platform. Before that he spent 7 years at Morgan Stanley and was involved in the development of their global electronic trading platform as well as the implementation of a number of automated trading strategies for cash and derivatives markets.</p>
EXTENDED PROBLEM SOLVING WORKING GROUP	
15.00	<p>Overcoming The Practical Challenges Of State Of The Art Algorithmic Trading This is your chance to set the agenda! Put your specific algorithmic trading questions to this expert panel and discuss the key issues impacting your daily work in the field</p> <p>Ali Hirs, Head Of Analytical Trading Strategy, NATIXIS CASPIAN CAPITAL MANAGEMENT</p> <p>Rajesh Nagella, Head Of Algorithmic Products EMEA, CITI</p>
16.00	Afternoon Tea
16.30	<p>Leveraging Dark Pool Market Structure For Algorithmic Execution</p> <p>Rajesh Nagella, Head Of Algorithmic Products EMEA, CITI</p> <p>Rajesh Nagella is Head of Algorithmic Products in EMEA and responsible for electronic trading products including Algorithms, Smart Order Routing and Internalization throughout the region. Previously, Rajesh was the US Head of Algorithmic Products at Citigroup, New York. Prior to Cit, Raj worked with Bank of America Securities and was Head of Electronic Trading Strategies. He began his career at Hull Trading, Chicago before joining Goldman Sachs where he was Co-Head of GSAT USA. Rajesh graduated with an MBA from the University of Chicago, Booth School of Business in 1999.</p>
17.00	<p>The Changing Landscape Of OTC Markets And Challenges And Opportunities For Algorithmic Trading</p> <p>Ganga Darbha, Head Of Algorithmic Trading Strategies, Global Markets NOMURA STRUCTURED FINANCE</p> <p>Dr. Gangadhar Darbha has a PhD (Economics, IGDIR, India) and Post-Doc (Finance, Wharton School, University of Pennsylvania). He is currently Head of Algorithmic Trading Strategies, Global Markets, Nomura Structured Finance. Before this he worked as the Head of Algorithmic Trading in Delta Finance in Rates, and Credit at Royal Bank of Scotland, London. He has previously worked at the National Stock Exchange in India, and in Algorithmic Trading in Morgan Stanley and ABN AMRO in London.</p>
PANEL DISCUSSION	
17.30	<p>Flash Crashes, Market Manipulation And Rogue Algorithms Assessing The Need For Speed Limits, Circuit Breakers And Other Proposed Regulatory Reforms</p> <p>Jim Gatheral, Professor Of Finance BARUCH COLLEGE, CUNY</p> <p>Jim Gatheral is professor of mathematics at Baruch College, CUNY teaching mostly courses in the Masters of Financial Engineering (MFE) program. Prior to joining the faculty of Baruch College, Jim was a Managing Director at Bank of America Merrill Lynch, and also an adjunct professor at the Courant Institute of the Mathematical Sciences, New York, where for many years he co-taught popular classes in the Masters Program of Mathematics in Finance. Prior to 2005 he headed the Equity Quantitative Analytics groups at Bank of America Merrill Lynch. Over his long career in the financial markets, he has been involved at one time or other in all of the major derivative product areas as bookrunner, risk manager and quantitative analyst.</p> <p>Valérie Ledure, Policy Officer, Directorate-General For The Internal Market & Services, EUROPEAN COMMISSION</p> <p>Valérie Ledure works for the European Commission's Directorate-General for the Internal Market and Services as a policy officer in the field of securities markets. She obtained a solid experience and knowledge of the financial sector and institutions while working at ING Bank in Corporate Finance and Securitisation businesses from 2000 to 2007. Before that she worked for PricewaterhouseCoopers as a financial auditor specialised in the audit of financial services companies.</p> <p>David Eliezer, Former Vice President, KNIGHT EQUITY MARKETS</p> <p>Until May 2010, David was Vice President of the Execution Group in Knight Equity Markets. Before this he worked as a Vice President at Goldman Sachs performing algorithmic trading of treasury bonds. David has previously worked at Bloomberg, Integrated Finance Limited and as Director of Quantitative Research at Numerix. He started his career at Morgan Stanley after completing a PhD in Physics from the University of California, Santa Barbara.</p> <p>Richard Olsen, Founder, OANDA</p>
18.15	Audience Q&A & Final Industry Round Up
18.20	End Of Summit Day

Main Conference Day One

Tuesday 12 April 2011

08.00	Registration & Coffee			
08.25	Chairman's Opening Address			
	GUEST ECONOMIC ADDRESS			
08.30	Recession, Recovery, Monetary Policy & Austerity Programmes: Determining What The Future Holds For Global Financial Markets Roger Bootle, Managing Director, CAPITAL ECONOMICS			
	TALKING REGULATION			
	Assessing The Progress Towards A More Simplified, Transparent & Standardised Derivatives Market Framework & The Likely Implications For Financial Services Firms			
09.00		Riccardo Rebonato, Head Of Front-Office Risk Management & Head Of Quantitative Analytics, GBM, RBS		
		Stacy Coleman, Vice President, Financial Infrastructure Department, Bank Supervision Group FEDERAL RESERVE BANK OF NEW YORK		
		Patrick Pearson, Head Of Financial Markets Infrastructure EUROPEAN COMMISSION		
	THE 360 DEGREE INDUSTRY OVERVIEW			
	Is It Time For Us To Go Back To Basics?			
09.45		Examining The Nature Of The Derivatives Market: What Impact Has The Credit Crisis Had? How Is The Derivatives Market Changing? What Other Changes Need To Be Made?		
		Michael Hintze, CEO & Senior Investment Officer, CQS Lorenzo Bergomi, Head Of Quantitative Research, Global Markets SOCIETE GENERALE		
		Bruno Dupire, Head Of Quantitative Research, BLOOMBERG		
10.30	Morning Coffee & Networking Break			
	Stream A The Latest Practical Techniques In Funding, Discounting, Liquidity & CVA Chairman: Alexander Sokol NUMERIX & COMPATIBL	Stream B Enhanced Volatility Modelling & Trading	Stream C New Innovations In Risk Management	Stream D The Latest Developments In Derivatives Regulation & Capital Requirements
11.00	Switching Financial Institutions To Marking To Market Under The CSA Regime Marco Bianchetti BANCA INTESA	The Variational Most-Likely-Path & Its Applications Jim Gatheral BARUCH COLLEGE CUNY	MODEL RISK How To Assess, Measure & Manage Model Risk: Pricing, Margins & Risk Management Massimo Morini BANCA IMI	EXAMINING CENTRAL COUNTERPARTIES Understanding The Implications Of The Proposed Regulatory Initiatives On Central Clearing For Financial Services Firms Stacy Coleman FEDERAL RESERVE BANK OF NEW YORK
11.40	FUNDING MASTERCLASS Session 1 A New Approach To Successfully Incorporating The Cost Of Funding Into Pricing Ziggy Jonsson ARAM GLOBAL	STOCHASTIC VOLATILITY Exploring A New Model Of Stochastic Volatility With Jumps Martijn Pistorius IMPERIAL COLLEGE LONDON	Bespoke Model Validation Alberto Elices SANTANDER	The Three Cs Of OTC Derivatives: Collateral, Clearing & Counterparty Risk Rama Cont COLUMBIA UNIVERSITY
12.20	Session 2 Overcoming The Obstacles To Accurately Pricing Uncollateralised Trades Christian Fries DZ BANK	STOCHASTIC & LOCAL STOCHASTIC VOLATILITY Calibration Of Stochastic & Local Stochastic Volatility Models Jan Maruhn UNICREDIT	Towards A Theory Of Calibration Peter Carr MORGAN STANLEY	THINKTANK SESSION Central Clearing Under The Microscope: What Does It Mean For Derivatives Modelling, Pricing, & Business Strategies? Jon Gregory SOLIM FINANCIAL PARTNERS Marco Avellaneda COURANT INSTITUTE Rama Cont COLUMBIA UNIVERSITY
13.00	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up
13.10	Lunch & Networking Break - Plus Sign up for "Meet The Speaker" Lunch Tables			
14.30	TALKING DVA How Can Firms Take Their Own Risk Of Default Into Account When Pricing Derivatives? Christoph Burgard BARCLAYS CAPITAL	An Efficient Implementation Of Stochastic Volatility By The Method Of Conditional Integration William McGhee RBS	THE LAW OF 2 PRICES Separately Modelling The Bid & Ask Price For More Dynamic Calculation Of Capital Requirements For Trades Dilip Madan UNIVERSITY OF MARYLAND	CONTINGENT CAPITAL Design & Analysis Of Contingent Capital Paul Glasserman COLUMBIA UNIVERSITY
15.10	A Unified Framework For Counterparty & Liquidity Charges Andrea Prampolini BANCA IMI	Farkas Lemma & Spread Options Vladimir Piterberg BARCLAYS CAPITAL	Implied Liquidity & The Hedging Of Liquidity Risk Wim Schoutens CATHOLIC UNIVERSITY OF LEUVEN	Is Standardisation The Enemy Of Innovation?: Assessing The Impact Of Moves Towards Standardization On Financial Products, Incentives & Future Innovation
15.50	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up
16.00	Afternoon Tea			
16.30	CVA MASTERCLASS Session 1 New Research In CVA Wrong-Way Modelling Dmitry Pugachevsky JP MORGAN	Finite Difference Based Calibration And Simulation Of Stochastic Local Volatility Models Jesper Andreasen DANSKE BANK	Real World vs. Risk Neutrality: Application To Risk, CVA & Capital Vladimir Chorniy BNP PARIBAS Lee Moran BNP PARIBAS	BASEL III MASTERCLASS Session 1 Assessing The Impact Of The Comprehensive Risk Measure (CRM) On The Correlation Business Under Basel III David Shelton BANK OF AMERICA MERRILL LYNCH
17.10	Session 2 Hedging CVA Exploring A New Practical Approach To Robust Hedging Of CVA Jon Gregory SOLIM FINANCIAL PARTNERS	Market Update: Attractive Trading Opportunities & Current Investor Focus Areas In Equity Volatility Pete Clarke CITI	Emergent Optimal Hedges Tom Hyer UBS	Session 2 Incremental Risk Charge And Comprehensive Risk Measure: Designing A New Market Risk Management Framework Vivien Brunel SOCIETE GENERALE
17.50	Session 3 PANEL: Modelling & Managing CVA In Practice Giovanni Cesari UBS Yann Coatanlem CITI INSTITUTIONAL CLIENT GROUP Josh Danziger VALERE CAPITAL Joe Holderness JP MORGAN	VOLATILITY TRADING PANEL Examining The Latest Strategies For Successful Volatility Trading Euan Sinclair BLUEFIN TRADING Peter van Kleef LAKEVIEW ARBITRAGE Peter Carr MORGAN STANLEY	Tail-Risks & Dynamic Portfolio Allocation Vivek Kapoor CITI	The Theory Of Granularity Adjustments Revisited: How To Value And Risk Manage A Book Of Credit-Sensitive Instruments Without Simulations Jean-David Ferminian ENSAE
18.30	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up
18.40	Champagne Roundtable Discussion Groups			
	Table 1 Peter Carr MORGAN STANLEY	Table 2 Jim Gatheral BARUCH COLLEGE	Table 3 Marco Avellaneda COURANT INSTITUTE	Table 4 Dilip Madan UNIVERSITY OF MARYLAND
				Table 5 Bruno Dupire BLOOMBERG
				Table 6 Paul Glasserman COLUMBIA UNIVERSITY

Main Conference Day Two

Wednesday 13 April 2011



08.30	Morning Coffee			
	Stream A The Latest Counterparty Risk, Collateral & Correlation Modelling Techniques	Stream B Cutting-Edge Innovations In Interest Rate Modelling	Stream C New Advances In Commodities Trading & Risk Management	Stream D New Techniques For Pricing & Hedging Hybrid Products
09.00	COLLATERAL MODELLING Understanding How Collateral Is Modelled, How It Interacts With The Trade And How It Is Included In Counterparty Risk Faisal Yousaf HSBC	MULTIPLE YIELD CURVES Multiple Curve Construction For Interest Rate Derivatives: Overcoming The Challenges Of Forecasting & Discounting Off Different Curves Igor Smirnov BNP PARIBAS	Generic Commodities Exotics: Is A Model For Crude Any Use For Coffee & Copper? Alan Stacey NOMURA	New Techniques For Modelling Hybrid Capital Securities Andrei Serjantov BNP PARIBAS
09.40	Trading CSAs Hans-Peter Schöch NOMURA	On the Term Structure of Interest Rates With Basis Spreads, Collateral & Multiple Currencies Akihiko Takahashi UNIVERSITY OF TOKYO	Option Pricing & Hedging By Risk Minimization With Multiple Factors & Transaction Costs Igor Halperin JP MORGAN	Fast Calibration & Pricing Of Convertibles Using A Jump Diffusion Model With Stochastic Credit David Frank BLOOMBERG
10.20	A Unified Approach To Correlation CVA & Collateral Dynamics Youssef Elouerkhaoui CITI	Parsimonious HJM Models For Multiple Yield-Curve Dynamics Andrea Pallavicini BANCA LEONARDO	JUMPS Developing Efficient Jump Models To Identify And Understand Volatility In The Commodities Market Michael Dempster UNIVERSITY OF CAMBRIDGE	VARIANCE DERIVATIVES Assessing The Pricing And Convergence Of Discretely Monitored Variance Derivatives And Volatility-Equity Hybrid Derivatives John Crosby UNIVERSITY OF GLASGOW
11.00	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up
11.05	Morning Coffee & Networking Break			
11.40	EXTENDED SESSION Correlations In Asynchronous Markets Lorenzo Bergomi SOCIÉTÉ GÉNÉRALE	Labor Market Models With Stochastic Basis Fabio Mercurio BLOOMBERG	New Classes Of Markovian Factor Models With Stochastic Volatility And Jumps For Commodity Futures Alex Levin RBC	VARIANCE SWAPS Quadratic Variance Swap Term Structure Models: How Can We Efficiently Capture Extreme Movements & Spikes Of Stochastic Volatility In Multi-Factor Diffusion Models Damir Filipovic EPFL
12.20		Expansion Techniques In Interest Rate Modeling Alexander Antonov NUMERIX	The Impact Of Hedgers And Speculators On Long-Term Oil Prices Illa Bouchouev KOCH SUPPLY & TRADING	SKEWS The Cross-Asset Skew Modelling Challenge Youssef Randjoui CITIGROUP
13.00	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up
13.10	Lunch & Networking Break - Plus Sign up for "Meet The Speaker" Lunch Tables			
14.30	A DYNAMIC MODEL FOR CORRELATION Extending Dupire-Local Volatility To Incorporate Non Trivial Behaviour Of Correlation Alex Langnau ALLIANZ INVESTMENT MANAGEMENT	Looking (Again) At Caplets Versus Swaptions Using The LMM-SABR Model Riccardo Rebonato RBS	Strategies For Overcoming Challenges In Energy Risk Management Ehud I Ronn MORGAN STANLEY	The Price Of An Equity Variance Swap In A Model With Stochastic Interest Rates Per Horfelt BARCLAYS CAPITAL
15.10	A Local Correlation Model: Motivation & Practical Implementation Adil Reghai NATIXIS	No Arbitrage SABR Jesper Andreasen DANSKE BANK Brian Huke DANSKE BANK	SHIPPING PRICES The Importance Of Shipping In Commodity Markets Helyette Geman UNIVERSITY OF LONDON & ESCP EUROPE	Mixed Volatility Dynamics: Pricing & Calibration Of Long Dated Multi-Asset Products Han Lee RBS
15.50	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up
16.00	Afternoon Tea			
16.30	Dispersion, Volatility & The Dynamics Of Correlation Lisa Borland EVINNE & ASSOCIATES	Practical Application Of SABR Volatility Curves Dong Qu UNICREDIT	AGRICULTURAL COMMODITIES A New Approach For Efficient Modelling Of Forward Curves For Agriculturals Yves Lehmann UBS Camilla Du Boulay UBS	VARIABLE ANNUITIES MASTERCLASS Session 1 Variable Annuities: Insurance Pricing vs. Market-Consistent Pricing Alexander van Haastrecht DELTA LLOYD
17.10	A Comparative Analysis Of Correlation Approaches In Finance Gunter Meissner UNIVERSITY OF HAWAII	Measuring Risk Premia In Rate Curves Julien Turc SOCIÉTÉ GÉNÉRALE	Measuring Correlation Risk For Energy Derivatives Roza Galeeva MORGAN STANLEY	Session 2 Pricing Inflation-Linked Annuities Alexander van Haastrecht DELTA LLOYD
17.50	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up
18.00	Champagne Roundtable Discussion Groups			
	Table 1 Alex Lipton BANK OF AMERICA MERRILL LYNCH	Table 2 Illa Bouchouev KOCH SUPPLY & TRADING	Table 3 Lorenzo Bergomi SOCIÉTÉ GÉNÉRALE	Table 4 Peter Jaecel OTC DERIVATIVES
			Table 5 Peter Austing BARCLAYS CAPITAL	Table 6 Massimo Morini BANCA IMI
18.30	The Global Derivatives & Trading Risk Management Cocktail Party			

CHAMPAGNE ROUNDTABLE DISCUSSION GROUPS

The Champagne Roundtable Discussion Groups provide you with the ideal place to meet face-to-face with some of our key speakers, in small groups of about 15 people. Choose between the tables and discuss specific issues and ideas that have arisen over the course of the day in a highly personal and interactive environment. Pre-registration required. Please check the event website for details.

Main Conference Day Three

Thursday 14 April 2011

08.20	Chairman's Welcome			
	GUEST QUANT ADDRESS			
08.45		The Role Of Mathematics In Finance: Relevance, Reliance, Robustness Paul Wilmott, Author, Researcher, Educator & Founder Of wilmott.com		
	GUEST ACADEMIC ADDRESS			
09.15	The Neuroscience Of Risk & Reaction Times John Coates, Senior Research Fellow In Neuroscience & Finance UNIVERSITY OF CAMBRIDGE			
09.45	5 Minute Transfer Break			
	Quantitative Problem Solving Working Groups Get Your Questions Answered By The Experts! Make The Most Of Your Time At The Conference By Posing Your Specific Questions To The Expert Panel & The Gathering Of Like-Minded Practitioners			
09.50	Innovations In Credit Derivatives Ziggy Jonsson ARAM GLOBAL Massimo Morini BANCA IMI	Innovations In Equity Derivatives Nicolas Grandchamp des Raux HSBC Jean-Jacques Raberyin BNP PARIBAS	Innovations In Fixed Income Derivatives Piotr Karasinski EBRD Fabio Mercurio BLOOMBERG	
10.20	Morning Coffee & Networking Break			
	Stream A New Techniques For Pricing & Hedging Equity Derivatives	Stream B New Practical Methods For Improving Computational Efficiency	Stream C The Latest Advances In FX & Interest Rate Derivatives Pricing, Hedging & Trading	Stream D Enhanced Volatility Modelling & Trading
10.50	Stochastic Dividend Modelling For Derivatives Pricing Hans Buehler JP MORGAN	Auto-Differentiation In Practice Jürgen Hakala EFG FINANCIAL PRODUCTS	What Drives Volatility Of Rates? Empirical Explorations In Developed & Emerging Markets Piotr Karasinski EBRD	EXTENDED SESSION Exploiting Discrepancies Between Historical & Implied Values Bruno Dupire BLOOMBERG
11.30	TRADING EXOTIC EQUITY DERIVATIVES How Has The Market For Exotic Equity Derivatives Changed And Where Are The New Opportunities? Arie Boleslawski SOCIÉTÉ GÉNÉRALE Mike de Vegvar UBS	EFFICIENT MONTE CARLO Making The Calculation Of Risk Through Monte Carlo Methods More Efficient By Using Adjoint Algorithmic Differentiation Luca Capriotti CREDIT SUISSE	Pricing & Modelling CMS Spread Options Joerg Kienitz DEUTSCHE POSTBANK	
12.10	Optimal No-Arbitrage Bounds Under Calibration: A Stochastic Control Approach Pierre Henry- Labordère SOCIÉTÉ GÉNÉRALE	Advances In GPU Computing For Derivative Pricing Models Thomas Weber SCICOMP	Innovations In Multi-FX Models Peter Austing BARCLAYS CAPITAL	
12.50	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up
13.00	Lunch & Networking Break			
14.00	Stream E Exploring The Latest Techniques In Pricing Hedging & Trading Credit Derivatives Liquidity Modelling For Credit Default Swaps & Bonds Damiano Brigo KING'S COLLEGE LONDON	DATA MINING Effective & Accurate Data Mining & Density Estimation Esteban Tabak COURANT INSTITUTE	Non-Parametric Stochastic/Local Volatility Modelling Grigore Tataru BLOOMBERG	Variance Swaps On Multivariate Time-Change Processes Andrey Itkin HAP CAPITAL
14.40	Interactions As Sources Of Correlations And Risk In Financial Networks Reimer Kühn KINGS COLLEGE LONDON	Efficient & Accurate Portfolio Risk Distributions Using Selective Re-Valuation Christian Fries DZ BANK	CURRENCY VOLATILITY Successfully Implementing Stochastic Intrinsic Currency Volatility Models Paul Doust RBS	BASKET OPTIONS Asymptotics For Basket Options Peter Laurence UNIVERSITA DI ROMA
15.20	Forecasting & Trading Future Correlations Arthur Bard CAPITAL FUND MANAGEMENT Artem Voronov NYU	Counterparty Credit Risk For Portfolios Of Netting Sets Claudio Albanese KINGS COLLEGE LONDON	DOUBLE NO TOUCH OPTIONS Double No-Touch: Market Consistent Pricing With LSV Models Iain Clark STANDARD BANK	SYSTEMIC RISK Understanding The Effect Of Derivatives Trading On Market Stability Matteo Marsili THE ABDOUS SALAM INTERNATIONAL CENTRE FOR THEORETICAL PHYSICS
16.00	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up
16.10	Afternoon Tea			
16.30	CDOs Recent Developments In Pricing CDOs With Stochastic Recovery Rates Martin Krekel UNICREDIT	Efficient Numerical PDE Methods To Solve Calibration And Pricing Problems In Local Stochastic Volatility Models Artur Sepp BANK OF AMERICA MERRILL LYNCH	Cash-Settled Swaptions: A Multi- Model Analysis Marc Henrard DEXIA	Stream F New Innovations In Portfolio Optimisation Portfolio Optimisation With Options Mark Broadie COLUMBIA
17.10	PRICING CDO OPTIONS Exploring A New Methodology For Pricing CDO Options: Can Accuracy Best Be Served By Modelling A Range Of Prices? Yadong Li BARCLAYS CAPITAL	Examining The Latest Techniques For Hardware Acceleration Peter van Kleef LAKEVIEW ARBITRAGE	A Class Of Lévy Interest Rate Models Based On The Zeta Process Lane Hughston IMPERIAL COLLEGE LONDON	Strategies For Managing Diversification Attilio Meucci KEPOS CAPITAL
17.50	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up	Q&A & Industry Round Up
18.00	End Of Day 3			

New For 2011

Main Conference Day 4: Friday 15 April 2011

Choose From 6 Full Day Technical MasterClass Sessions

See page 4 for details

The ICBI Global Derivatives 2nd Annual High Frequency Finance & Algorithmic Trading Summit

Designing & Implementing Effective Trading Algorithms In The New Market & Regulatory Environment

Monday 11 April 2011

08.30
Registration & Welcome Coffee

08.55
Chairman's Opening Remarks

09.00
**Exploring The Latest Approaches To Building
Robust Volatility Models Of High Frequency Data**



Marco Avellaneda
Professor Of Mathematics
**COURANT INSTITUTE OF MATHEMATICAL
SCIENCES, NEW YORK UNIVERSITY & Partner,
FINANCE CONCEPTS**

Marco Avellaneda has been involved in teaching, developing and practicing quantitative finance for the last 15 years. He worked at Banque Indosuez as consultant in FX derivatives, as a vice-president in fixed-income research at Morgan Stanley, as quant strategist at option marketmaking firm Gargoye Strategic Investments, as Head of Volatility Arbitrage at the hedge fund Capital Fund Management where he created the Nimbus Fund, and as Portfolio Manager for quant trading at the Galleon Group. His interests are unabashedly focused on quantitative alpha generation. He is known in academic finance as the inventor of the Uncertain Volatility model, for developing model-calibration algorithms using Weighted Monte Carlo/Max Entropy, for the theory behind dispersion trading, and for his more recent works on statistical arbitrage in the US equities market, high-frequency trading and price forecasting. A faculty member at the Courant Institute, he teaches classes in Stochastic Calculus, Risk-management and Portfolio Theory (non-orthodox, yes?), PDEs in finance and Quantitative Investment Strategies. He is in the editorial boards of Communications on Pure and Applied Mathematics (he teaches pure maths rock!), the International Journal for Theoretical and Applied Finance and Quantitative Finance, among others and authored the textbook "Quantitative Modeling of Derivative Securities". He was awarded the prize 2010 Quant of the Year by RISK Magazine.

09.40
**Where Next For High Frequency Finance?:
New Asset Classes, New Markets, & New
Methodologies**



Robert Almgren
Co-Founder
QUANTITATIVE BROKERS

Robert Almgren is also a Fellow in the Mathematics in Finance Program at New York University. Until 2008, Dr Almgren was a Managing Director and Head of Quantitative Strategies in the Electronic Trading Services group of Banc of America Securities. From 2000-2005, he was a tenured Associate Professor of Mathematics and Computer Science at the University of Toronto, and Director of its Master of Mathematical Finance program.



Richard Olsen
Founder
OANDA

Richard Olsen is an economic researcher in high frequency finance. He is co-founder of OANDA, a market maker and information source for currency; is chief executive of Olsen Ltd, an investment manager, and visiting professor at the Centre for Computational Finance and Economic Agents at the University of Essex.



Peter van Kleeff
Partner
LAKEVIEW CAPITAL MARKET SERVICES

Prior to his role at Lakeview, Peter managed significant hedge fund type investment portfolios and quantitative trading departments for among others Cooper Neff, Salomon Brothers, HypoVereinsbank and Credit Lyonnais. He has over 15 years of experience in the development and running of sophisticated automated trading operations.

10.20
Audience Q&A & Round Up

10.30
Morning Coffee

11.00
**How Can Algorithmic Trading Establish Itself
Across Asset Classes**



Robert Almgren
Co-Founder
QUANTITATIVE BROKERS

11.40
**Advanced Algorithmic Strategies: Order Book &
News Based Strategy Design & Implementation**



Peter van Kleeff
Partner
LAKEVIEW CAPITAL MARKET SERVICES

12.20
**Graphical Insights Into Market Liquidity,
Volatility & Effects Of Correlations**



Ali Hirs
Head Of Analytical Trading Strategy
NATIXIS CASPIAN CAPITAL MANAGEMENT
Ali Hirs is Head of Analytical Trading Strategy at Natixis Caspian Capital Management, LLC. Prior to his current position, Ali worked at Morgan Stanley, Banc of America Securities, and Prudential Securities. He is also an adjunct professor at Columbia University and Courant Institute.

13.00
Audience Q&A & Round Up

13.10
**Networking Lunch –
Plus Sign Up For The ‘Meet The Speaker’
Lunch Tables**

14.20
**Integrating Boundaries: A Systematic Approach
To Automated Cross Asset, Multi Frequency
Trading**



Mark Holt
Head Of Implementation, Systematic Trading Group
BLUECREST CAPITAL MANAGEMENT LLP
Mark Holt is Head of Implementation for the systematic trading group at BlueCrest Capital Management LLP. He has spent the last 15 years automating trading within and between major financial institutions. Joined BlueCrest after 5 years at UBS where he was responsible for the architecture and development of their European algorithmic trading platform. Before that he spent 7 years at Morgan Stanley and was involved in the development of their global electronic trading platform as well as the implementation of a number of automated trading strategies for cash and derivatives markets.

15.00
**Overcoming The Practical Challenges Of State Of
The Art Algorithmic Trading**

This is your chance to set the agenda! Put your specific algorithmic trading questions to this expert panel and discuss the key issues impacting your daily to work in the field



Ali Hirs
Head Of Analytical Trading Strategy
NATIXIS CASPIAN CAPITAL MANAGEMENT



Rajesh Nagella
Head Of Algorithmic Products EMEA
CITI

16.00
Afternoon Tea

16.30
**Leveraging Dark Pool Market Structure For
Algorithmic Execution**



Rajesh Nagella
Head Of Algorithmic Products EMEA
CITI

Rajesh Nagella is Head of Algorithmic Products in EMEA and responsible for electronic trading products including Algorithms, Smart Order Routing and Internal Crossing throughout the region. Previously, Rajesh was the US Head of Algorithmic Products at Citigroup, New York. Prior to Citi, Raj worked with Bank of America Securities and was Head of Electronic Trading Strategies. He began his career at Hull Trading, Chicago before joining Goldman Sachs where he was Co-Head of GSAT USA. Rajesh graduated with an MBA from the University of Chicago, Booth School of Business in 1999.

17.00
**The Changing Landscape Of OTC Markets And
Challenges And Opportunities For Algorithmic
Trading**



Ganga Darbha
*Head Of Algorithmic Trading Strategies,
Global Markets*
NOMURA STRUCTURED FINANCE

Dr. Gangadhar Darbha has a PhD (Economics, IGIDR, India) and Post-Doc (Finance, Wharton School, University of Pennsylvania). He is currently Head of Algorithmic Trading Strategies, Global Markets, Nomura Structured Finance. Before this he worked as the Head of Algorithmic Trading in Delta Business in Rates, and Credit at Royal Bank of Scotland, London. He has previously worked at the National Stock Exchange in India, and in Algorithmic Trading in Morgan Stanley and ABN AMRO in London.

17.30
**Flash Crashes, Market Manipulation And Rogue
Algorithms Assessing The Need For Speed
Limits, Circuit Breakers And Other Proposed
Regulatory Reforms**



Jim Gatheral
Professor Of Finance
BARUCH COLLEGE, CUNY

Jim Gatheral is professor of mathematics at Baruch College, CUNY teaching mostly courses in the Masters of Financial Engineering (MFE) program. Prior to joining the faculty of Baruch College, Jim was a Managing Director at Bank of America Merrill Lynch, and also an adjunct professor at the Courant Institute of the Mathematical Sciences, New York, where for many years he co-taught popular classes in the Masters Program of Mathematics in Finance. Prior to 2005 he headed the Equity Quantitative Analytics groups at Merrill Lynch. Over his long career in the financial markets, he has been involved at one time or other in all of the major derivative product areas as bookrunner, risk manager and quantitative analyst.



Valérie Ledure
*Policy Officer, Directorate-General
For The Internal Market & Services*
EUROPEAN COMMISSION

Valérie Ledure works for the European Commission's Directorate-General for the Internal Market and Services as a policy officer in the field of securities markets. She acquired a solid experience and knowledge of the financial sector and institutions while working at ING Bank in Corporate Finance and Securitisation businesses from 2000 to 2007. Before that she worked for PricewaterhouseCoopers as a financial auditor specialised in the audit of financial services companies.

David Eliezer
Former Vice President
KNIGHT EQUITY MARKETS

Until May 2010, David was Vice President of the Execution Group in Knight Equity Markets. Before this he worked as a Vice President at Goldman Sachs performing algorithmic trading of treasury bonds. David has previously worked at Bloomberg, Integrated Finance Limited and as Director of Quantitative Research at Numerix. He started his career at Morgan Stanley after completing a PhD in Physics from the University of California, Santa Barbara.



Richard Olsen
Founder
OANDA

18.15
Audience Q&A & Final Industry Round Up

18.20
End Of Summit Day

s Sessions

DAY
1

Main Conference
Tuesday 12 April 2011

08.00 Registration & Coffee
08.25 Chairman's Opening Address
08.30

Guest Economic Address THE GLOBAL ECONOMIC OUTLOOK

Recession, Recovery, Monetary Policy & Austerity Programmes: Determining What The Future Holds For Global Financial Markets



Roger Bootle
Managing Director
CAPITAL ECONOMICS

One of the City of London's best-known economists, Roger Bootle runs the consultancy, Capital Economics, which specialises in macroeconomics and the economics of the property market. He is also Economic Adviser to Deloitte, a Specialist Adviser to the House of Commons Treasury Committee and an Honorary Fellow of the Institute of Actuaries. He was formerly Group Chief Economist of HSBC and, under the previous Conservative government, he was appointed one of the Chancellor's panel of Independent Economic Advisers, the so-called "Wise Men". Roger Bootle studied at Oxford University and then became a Lecturer in Economics at St Anne's College, Oxford. Most of his subsequent career has been spent in the City of London. He has written many articles and several books on monetary economics. Roger's latest book, *The Trouble with Markets*, analyses the deep causes of the recent financial crisis and discusses the threats to capitalism arising from it. His previous book, *Money for Nothing*, correctly anticipated the financial crisis and has been widely acclaimed. This followed the success of *The Death of Inflation*, published in 1996, which became a best-seller and was subsequently translated into nine languages. Initially dismissed as extreme, *The Death of Inflation* is now widely recognised as prophetic. Roger is also joint author of the book *Theory of Money*, and author of *Index-Linked Cuts*. Roger is a regular columnist for *The Daily Telegraph* and appears frequently on television and radio.

09.00

Panel Discussion

TALKING REGULATION

Assessing The Progress Towards A More Simplified, Transparent & Standardised Derivatives Market Framework & The Likely Implications For Financial Services Firms



Stacy Coleman, Vice President, Financial Infrastructure Department, Bank Supervision Group, FEDERAL RESERVE BANK OF NEW YORK

Stacy Coleman is a Vice President in the Bank Supervision Group at the Federal Reserve Bank of New York where she works on efforts to improve the resiliency of the over-the-counter derivatives infrastructure. From 2004 to 2007, she served as the Board's representative to the Accord Implementation Group for Operational Risk under the Basel Committee on Banking Supervision. From 2007 to May 2010, Ms. Coleman worked at the Federal Reserve Bank of Richmond and was responsible for overseeing the Bank's discount window lending and intraday credit extensions and for ensuring that risks were accurately identified and addressed across the Richmond Fed's supervised institutions. Ms. Coleman holds a Bachelor of Arts degree in Economics and Business Administration from Kalamazoo College in Kalamazoo, Michigan and a Master of Business Administration in Finance from Johns Hopkins University in Baltimore, Maryland.



Patrick Pearson
Head Of Financial Markets Infrastructure, EUROPEAN COMMISSION

Patrick Pearson is Head of Financial Markets Infrastructure in the European Commission's Internal Market Directorate General. He is heading the team that is responsible for regulating OTC derivatives and clearing and settlement. He previously headed the Commission's banking regulatory team and was responsible for the Financial Services Action Plan. Before joining the European Commission Patrick Pearson worked for the Dutch Finance Ministry.

Ricardo Rebonato, Head Of Front-Office Risk Management & Head Of Quantitative Analysis, GBM, RBS
Bio on pg. 4

09.45

Panel Discussion

THE 360 DEGREE INDUSTRY OVERVIEW

Is It Time For Us To Go Back To Basics? Examining The Nature Of The Derivatives Market: What Impact Has The Credit Crisis Had? How Is The Derivatives Market Changing? What Other Changes Need To Be Made?



Michael Hintze
CEO & Senior Investment Officer
COS

Prior to establishing COS, Michael was Managing Director in the Leveraged Funds Group at CSF where he developed the strategy and management team for the CSF Convertible & Quantitative Strategies Fund, which later became COS Convertible & Quantitative Strategies Fund. Before this Michael was Managing Director and Head of Convertibles and Equity Derivatives at CSFB, responsible for global convertible bond and equity derivative research, proprietary trading and sales. Before joining CSFB in 1996, Michael worked at Goldman Sachs for 12 years in a variety of roles including: Managing Director and Head of UK Trading and Head of European Emerging Markets Trading.



Lorenzo Bergomi
Head Of Quantitative Research, Global Markets, SOCIÉTÉ GÉNÉRALE

Lorenzo Bergomi has been with SG since 1997. Originally trained in electrical engineering, Lorenzo obtained a PhD in theoretical physics in the theory group at CEA, Saclay, France, then spent two years in the physics department of MIT before joining SG. While his initial focus was on equity derivatives, his current mandate is global.

Bruno Dupire
Head Of Quantitative Research
BLOOMBERG
Bio on pg. 4

10.30

Morning Coffee & Networking Break

Stream A:
The Latest Practical Techniques In Funding, Discounting, Liquidity & CVA

11.00

Switching Financial Institutions To Marking To Market Under The CSA Regime

- Where is the market?
- Updating pricing models
- Switching derivatives & bonds to CSA discounting
- P&L impact calculation
- Trading decisions
- IT decisions
- Risk Management decisions
- Accounting decisions
- Management decisions



Marco Bianchetti, Senior Quant & Risk Manager
BANCA INTESA SANPAOLO

Marco Bianchetti joined the Market Risk Management, Pricing and Financial Modelling area of Banca Intesa Sanpaolo in 2008. His recent work focuses on model risk management, interest rate modelling and pricing of derivatives. Previously he worked for eight years in the front office Financial Engineering area of Banca Caboto (now Banca IMI), developing pricing models and applications for fixed income and inflation trading desks. He holds a M.Sc. in theoretical nuclear physics and a Ph.D. in theoretical condensed matter physics from the University of Milan.

11.40

FUNDING MASTERCLASS

Session 1: 40 minutes

Incorporating The Cost Of Funding Into Pricing

- Exploring new developments in implied risk-free rates and implications for derivatives pricing
- When the world collapses: the likelihood of simultaneous counterparty default and a large jump in derivatives prices
- Bond/CDS basis when LIBOR is no longer risk-free: implications on higher order derivatives
- Synthetic funding through Collateral Support Agreements, correlation between general funding costs and credit derivatives
- The yield assumption in markets for ABS assets: comparing traditional methods with synthetic methods from a funding perspective



Ziggy Jonsson, Partner
ARAM GLOBAL

Ziggy Jonsson is a partner of ARAM Global, Asset Recovery Advisors and Managers and is based in New York. In mid 2008 he was appointed head treasury for Giltair bank in the last final months of the Icelandic banking system and served as a senior advisor to the government created Islandsbanki (the New Bank) in the subsequent restructuring. Previously he headed up the Structured Credit Trading for Bank of America Securities in North America, running synthetic CDO and hybrid trading desks after spending the early part of his career managing Treasury and Derivatives Trading for Kaupthing Bank.

Session 2: 40 minutes

Discounting Revisited: Valuations Under Funding Costs, Counterparty Risk & Collateralization

- Motivation: funding costs, counterparty risk and own credit
- Valuation using liquidation values
- Valuation with funding costs
- Valuation with funding costs and counterparty risk

Christian Fries

Head Of Model Development, Group Risk Control

DZ BANK

Christian is also a lecturer at University of Frankfurt. His current research interests are hybrid interest rate models and Monte Carlo methods. His papers and lecture notes may be downloaded from <http://www.christian-fries.de/fmmath>. He is the author of "Mathematical Finance: Theory, Modeling, Implementation", Wiley, 2007.

13.00

Audience Q&A & Industry Round Up

13.10

Lunch & Networking Break

14.30

How Can Firms Take Their Own Risk Of Default Into Account When Pricing Derivatives?

- Combining bilateral counterparty risk and funding costs into a common modelling framework
- How ones own credit impacts hedging strategies for derivatives
- Asset/liability modelling for new derivatives business
- Should old business impact new business?
- Relationships between derivatives desks, credit-counterparty desk and funding unit



Christoph Burgard
Global Head of Equity, EM and Credit-Counterparty Derivatives Modelling
BARCLAYS CAPITAL

Christoph Burgard is a Managing Director and Global Head of Equity, EM and Credit-Counterparty Derivatives Modelling at Barclays Capital. After obtaining a PhD in particle physics from Hamburg University he was a fellow at CERN and DESY before joining Barclays Capital in 1999.

15.10

A Unified Framework For Counterparty & Liquidity Charges

- Inconsistencies in the standard theory of DVA and liquidity
- Risky funding with DVA for the borrower
- Risky funding with CVA for the lender
- The accounting view: always pretending to be default free
- DVA and the liquidity benefit in a bilateral setting
- Liquidity value adjustment



Andrea Prampolini
Counterparty Risk Trader
BANCA IMI

Andrea Prampolini is counterparty risk trader in the Credit Treasury of Banca IMI, the investment bank of IntesaSanpaolo, with responsibilities over the development of CVA trading operations. He has a quantitative background and ten years of experience in trading derivatives on various underlyings, with a particular focus on credit and interest rates. His research interests include correlation mapping and the interactions between funding liquidity and counterparty risk.

15.50

Audience Q&A & Industry Round Up

16.00

Afternoon Tea

- Application to volatility derivatives: links between vanilla option, VIX options and variance options
- Time based vs move based strategies
- Robust hedging: decomposing volatility risk across strikes and maturities

Correlation Basics

- Misconceptions about correlation
- Measures of dependency: correlation, copula and more
- Correlation across assets and time
- Coupling random variables or processes?
- Coupling levels or returns?

Modeling Correlation

- Estimating correlation; asynchronous and incomplete data
- Study of empirical facts
- nD Local Volatility model

- Stochastic covariance matrix modelling
- How to model stochastic correlation
- How to correlate jumps

Pricing With Correlation

- Break-even points in n dimensions
- Correlation skew: basket options and CDO examples
- Spread options and steepeners
- Pricing Mountain Range options
- Hedgeability with options on the components

Correlation Trading

- What can be locked and not locked
- Correlation swaps and options
- Correlation management
- Dispersion and diversification trades and arbitrage

Counterparty Risk CVA On Rates, Commodities & Credit (1h)

Interest Rate derivatives: CVA on interest rate swaps with netting
Commodities: CVA for oil swaps
Credit Derivatives: CVA on credit default swaps
Wrong way risk in all the above cases
Precise valuation vs. Basel II deduced multipliers

Calibrating the volatility function

Empirical evidence

Calibrating and hedging under conditions of market turmoil

models and on local vs stochastic volatility models

Stress-Testing Design & Pitfalls To Avoid Market

information to design stress-tests, with a practical example on correlation skew
Historical information to design stress-tests in illiquid markets, with a practical example from mapping for credit bespoke portfolios
Pitfalls in stress-testing: practical examples on copulas for liquidity risk, dynamic VaR, wrong-way risk

Copper and Aluminium ETFs : the new kids on the block

M&As in Mining and Energy

Back to Physical: The Benefits and the Global Risk

Incorporating derivatives in portfolio optimization

Portfolio Optimization In The Presence Of Estimation Risk (not including MB below)

Quantifying model risk: intuition, theory, and practice (with Mark Broadie)
The two-step mean/risk framework (mean/variance, mean/CVaR)
Advanced optimization techniques: (second order) cone programming
The robust mean/variance framework

Dynamic Portfolio Management

Convex/concave strategies
Delta-replication
CPPI, TIPP, drawdown control

Portfolio Construction

The Grinold-Kahn approach
The Black-Litterman approach
Beyond Black-Litterman: entropy-based Fully Flexible Views

Advanced Portfolio Optimization - I (1h)

Diversification measures: a review
The mean/variance/diversification frontier

Advanced Portfolio Optimization - II (with Mark Broadie)

(including MB below)
Scenario approach to portfolio optimization
The mean/variance/skewness frontier

Choose From 6 Full Day Technical MasterClasses

Volatility & Correlation Modelling & Trading In Practice (9am - 4pm)



Led by **Bruno Dupire**
Head of Quantitative Research, BLOOMBERG
Bruno Dupire is head of Quantitative Research at Bloomberg L.P., which he joined in 2004. Prior to this assignment in NY, he has headed the Derivatives Research teams at Société Générale, Paribas Capital Markets and Nikko Financial Products where he was a Managing Director. He is best known for having pioneered the widely used Local Volatility model (simplest extension of the Black-Scholes-Merton model to fit all option prices) in 1993 and subsequent stochastic volatility extensions. He is a Fellow and Adjunct Professor at NYU and he is in the Risk magazine "Hall of Fame" of the 50 most influential people in the history of Derivatives and Risk Management. He is the recipient of the 2006 "Cutting edge research" award of Wilmont magazine and was voted in 2006 the most contributing practitioner of the 5 previous years in the ICB Global Derivatives industry survey. He is the recipient of the Risk Magazine "Lifetime Achievement" award for 2008.

Review Of Some Pressing Market Topics

- Building a good volatility surface
- Stochastic Local Volatility Models
- Calibration of local correlation
- Decomposition of Vega across strikes and maturities
- Joint calibration to SPX and VIX skews
- Options on double short ETF

The Fundamentals Of Volatility

- The different kinds of volatility
- Market facts: volatility behaviour and regimes
- Historical volatility estimation
- Implied volatility inter/extrapolation, Roger Lee's moment formula
- Study of empirical behaviour Market facts: volatility behaviour and regimes
- Historical volatility estimation

- Implied volatility inter/extrapolation, Roger Lee's moment formula
- Study of empirical behaviour

Volatility Models Review

- Black-Scholes model
- Local Volatility Model
- Heston model
- SABR model
- Bergomi model
- Stochastic Local Volatility Models

Building A Good Implied Volatility Surface

- Requirements: accurate, arbitrage free, robust and smooth
- First step: model fitting
- Second step: non parametric fitting of residuals
- Examples and applications

Local Volatility In Practice

- Obtaining the local volatility surface: calibration vs. Stripping formula
- Pricing with local volatility: finite difference and Monte Carlo
- Robust risk management: computing superbuckets
- Stochastic interest rates

Volatility Arbitrage

- Frequency/phase arbitrage
- Dynamic skew arbitrage
- Volatility derivatives arbitrage

Advanced topics

- Matching the volatility surface and the forward skew
- Impact of the skew on exotics: case study with barrier options and cliquets
- Delta hedge: calendar time and business time delta hedge
- Linking skew and uncertainty on historical volatility

Counterparty Valuation Adjustment (CVA) & Credit Models In A Crisis (9am - 4pm)



Led by **Damiano Brigo**
Gilbert Professor Of Mathematical Finance, KING'S COLLEGE LONDON
Damiano Brigo is Gilbert Professor of Mathematical Finance at King's College, London. Formerly Managing Director of Fitch Solutions, during his 14 years in the industry Damiano published more than 50 works in Mathematical Finance, Probability and Statistics, and field reference books in stochastic interest rate and credit. He is Managing Editor of the International Journal of Theoretical and Applied Finance, and is a member of the Fitch Advisory Board and in the Scientific committees for conferences occurring at several academic institutions worldwide. He holds a Ph.D. in stochastic filtering with differential geometry.

- **Credit Default Swaps (CDS); Corporate Bonds; CDS Big Bang** (30min)

- **Single Name Credit Models** (1h)

Reduced Form, hazard rate and Intensity
Deterministic intensity: piecewise constant or linear
Calibration: CDS's with examples
Palmat and Lehman
Hints at stochastic intensity modelling

- **Multi Name Credit Derivatives** (30min)

First to default
Default baskets
Credit Indices
CDO tranches
DJ-Traxx and CDX and related tranches
CDOs and the crisis

- **Multi Name Reduced Form Models & Copulas** (2h)

Introduction to copulas; Gaussian copula

First and N-th to default with copulas
CDO's with factor copulas
Implied correlation in index tranches.
Compound correlation
Lack of invertibility. Base correlation.
Negative losses
Known limits of implied correlations
pre- and in-crisis
Inconsistency at single tranche level, inconsistency across the capital structure, inconsistency across maturities

The LMM-SABR Model: The New Paradigm For Pricing, Calibrating, Hedging Interest-Rate Derivatives Modelling In The Presence Of Smiles (9am - 4pm)



Led by **Riccardo Rebonato**, *Head Of Front-Office Risk Management & Head Of Quantitative Analytics, GBM RBS*

Riccardo is Head Of Front-Office Risk Management & Head Of Quantitative Analytics, GBM. He is also a Visiting Lecturer at Oxford University for the Mathematical Finance Diploma and Visiting Fellow at the Applied Mathematical Department of Oxford University. He holds Doctorates in Nuclear Engineering and Science of Materials/Solid State Physics. Prior to joining the RBS Group, he was, at the same time, Head of the Complex Derivatives Trading Desk and of the Complex Derivatives Research Group at Barclays Capital, where he worked for nine years. Before that he was a Research Fellow in Physics at Corpus Christi College, Oxford, UK. He is the author of several books; the most recent are "The SABR-LIBOR Market Model: Pricing, Calibration and Hedging for Complex Interest Rate Derivatives" (2009) and "Coherent Stress Testing: A Bayesian Approach" (2010).

- **The LIBOR Market Model framework (deterministic volatility)**

- **Deriving the drifts of the forward rates**

- **The SABR Model (and how to improve on the Hagan formula)**

- **Qualitative hedging behaviour**

- **Combining LMM and SABR**

- **Analytical approximation to swaption prices**

- **Calibrating to caplets and to swaptions**

Model Risk Management For Interest Rates, Funding & Credit (9am - 4pm)



Led by **Massimo Morini**, *Head Of Credit Models & Coordinator Of Model Research, BANCA IMI*
Massimo holds a Ph.D. in Mathematics and a MSc in Economics. He is Head of Credit Models and Coordinator of Model Research at IMI Bank. Massimo is Professor of Fixed Income at Bocconi University and was Research Fellow at Cass Business School of London City University. He regularly delivers advanced training on model risk management, credit modelling, interest rate market models and correlation modelling. He has led the workshops on financial modelling and the credit crunch in the main international conferences. His papers appeared on journals including Risk Magazine, Mathematical Finance and the Journal of Derivatives.

- **Understanding Model Risk**

Lessons from the past crises
Different approaches to model risk
The regulator's view
From theory to practice: a practical scheme for model risk management

- **When The Market Model Changes: Example From Interest Rates**

How the interest rates market changed with the crisis
Basis spreads, Swaps, FRAs and new relationships for forward rates

Explaining the new patterns with collateral, credit and liquidity risk in the interest rate market
Models with multiple curves

- **Revisiting The foundations: Liquidity, Collateral & Discounting**

Separating discounting from Libor in interest rate derivatives
Eonia discounting for collateralized derivatives
Computing liquidity charges for non-collateralized derivatives without double counting with credit

Funding spread and bond basis

- **Managing Model Risk When Using Approximations:**

Example From Interest Rates
How the crisis broke the foundations of most approximations used for interest rate derivatives
Interest rate covariances and the swaption approximation in the Libor Market Model
The shape of the term structure and convexity adjustments for CMS
Sabr stochastic volatility

The limits of the Hagan approximation

- **Model Risk In Hedging: The Case Of The Swaption Smile**

The difference between model risk in pricing and model risk in hedging
An example on SABR vs local volatility models in hedging swaptions
The shadow delta in the swaption smile

Investing In Commodities (9am - 4pm)



Led by **Helyette Geman**, *Director Commodity Finance Centre, UNIVERSITY OF LONDON & ESCP EUROPE*

Helyette Geman is the Director of the Commodity Finance Centre and ESCP Europe. She is a graduate of Ecole Normale Supérieure in Mathematics, holds a Masters degree in Theoretical Physics and Ph.Ds in Probability and Finance. Professor Geman has been a scientific advisor to major financial institutions, energy and mining

companies for the last 16 years, covering the spectrum of interest rates, catastrophic risk, crude oil and energy, as well as metals and agricultural. She was previously the Head of Research at Caisse des Dépôts in Paris. Professor Geman was the first president of the Bachelor Finance Society and has published more than 100 papers in top international finance journals including the Journal of Finance, Mathematical Finance, Journal of Financial Economics. She was named in 1993 Member of Honour of the French Society of Actuaries. Professor Geman's research includes interest rates and catastrophic insurance, asset price and commodity

forward curve modeling. Prof Geman was named in 2004 in the Hall of Fame of Energy Risk and received in July 2008 the medal for Sciences of the Institute for Advanced Studies of the University of Bologna for the GCMY model, a pure jump Levy process widely used in finance since 2002. Her book Commodities and Commodity Derivatives: Energy, Metals and Agricultural published by Wiley Finance in January 2005 is the reference book in the field. Prof Geman is a Member of the Board of the UBS-Bloomberg Commodity Index. She edited in 2008 the book Risk Management in Commodity Markets: from Shipping to Agricultural and Energy and

became in 2010 the first Wilmar-International Invited Professor of Commodities Business at Singapore Management University.

- **The different ways to get exposure to commodities: Futures, Commodity indexes, Structured**
- **Notes, ETFs/ ETCs, energy and mining equity**

Advanced Portfolio Management (9am - 4pm)



Led by **Attilio Meucci**, *Chief Risk Officer, KEPOS CAPITAL*

Attilio Meucci is the chief risk officer at Kepos Capital LP. Concurrently he is adjunct professor at the Master in Financial Engineering - Saatchi College - CUNY, where he teaches the intensive Advanced Risk and Portfolio Management bootcamp. Previously, Attilio was the head of research at ALPHA, Bloomberg LP's portfolio analytics and risk platform; a researcher at POINT, Lehman Brothers' portfolio analytics and risk platform; a trader at the hedge fund Relative Value International; and a consultant at Bain & Co, a strategic consulting firm. Concurrently he taught at Columbia, NYU-Courant and Bocconi University. Attilio is the author of Risk and Asset Allocation - Springer and numerous other publications in practitioners and academic journals. He holds a BA summa cum laude in Physics from the University of Milan, a MA in Economics from Bocconi University, a

PhD in Mathematics from the University of Milan and he is CFA charterholder. Attilio is fluent in six languages and loves physical activity in the outdoors.



With guest lectures by **Mark Broadie**, *Carson Family Professor of Business, GRADUATE SCHOOL OF BUSINESS, COLUMBIA UNIVERSITY*

Mark Broadie is the Carson Family Professor of Business at the Graduate School of Business at Columbia University. He received a B.S. from Cornell University and Ph.D. from Stanford University. His research focuses on problems in the pricing of derivative securities, management, and portfolio optimization. Professor Broadie is financial engineering area editor of Operations Research, and associate editor for Finance and Stochastics, SIAM Journal on Financial Mathematics and Computational

Management Science and the former editor-in-chief of the Journal of Computational Finance. At Columbia he teaches the elective courses Options Markets, Security Pricing: Models and Computation, Computational Finance and Computing for Business Research. He has given seminars and courses worldwide. Broadie has served as a consultant for a number of financial firms and previously he was a vice president at Lehman Brothers (now Barclays Capital) in their fixed-income research group.

- **The Modular Steps Of Advanced Risk & Portfolio Management, A Technical Overview**

- **Factor Modeling: Introduction, Myths & Pitfalls**

Cross-sectional, time-series, statistical: common principles, differences, applications

The "systematic + idiosyncratic" myth
The new "dominant + residual" paradigm
Models for estimation vs. models for attribution
Relationship with financial theory (CAPM and APT)
Relationship with optimization theory

- **New Generation Factor Modeling: "Factors On Demand"**

Top-down attribution
Linear models for non-linear securities
On the fly factor modeling
Dynamic best pool of factors
No-Greek hedging
Random matrix theory estimation / fundamental attribution

16.30

CVA MASTERCLASS

Session 1: 40 minutes

Modeling Wrong Way Risk For Equity Trades

- Equity wrong way and right way trades
- Partial- and self-relatedness
- Value at default and retention schedule
- Modeling decline before default
- Cross-asset model
- Extension to other asset classes



Dmitry Pugachevsky, Managing Director, Global Head Of Counterparty Credit Modelling JPMORGAN

Dmitry Pugachevsky is a Managing Director with JPMorgan and a global head of Counterparty Credit Modelling. His responsibilities include developing new models for calculating CVA across different asset classes and supporting credit portfolio trading. Before starting with JPMorgan in 2008 Dmitry was a global head of Credit Analytics of Bear Stearns for seven years, being responsible for modelling the whole spectrum of credit instruments. Prior to that, he worked for eight years with analytics groups of Bankers Trust and Deutsche Bank, developing models for credit, fixed income, and equity derivatives. Dr. Pugachevsky received his PhD in applied mathematics from Carnegie Mellon University. He is a frequent speaker for credit conferences and published several papers and book chapters on modelling counterparty credit risk and pricing derivatives instruments.

Session 2: 40 minutes

Practical Hedging Of CVA

- The complexities of CVA
- CVA greeks
- The unintended consequences of hedging
- Business model for a CVA desk
- When (and when not) to hedge



Jon Gregory, Partner SOLUM FINANCIAL PARTNERS

Dr Jon Gregory is a partner at Solum Financial and specialises in counterparty risk and CVA related consulting and advisory projects. He has worked on many aspects of credit risk in his career, being previously with Barclays Capital, BNP Paribas and Citigroup. He is author of the book "Counterparty Credit Risk: The new challenge for global financial markets". Jon holds a PhD from Cambridge University.

Session 3: 40 minutes

Panel Discussion**Modelling & Managing CVA In Practice**

Giovanni Cesari, Managing Director, UBS

He is the global head of the CVA-Quant team, a Front Office group responsible for the development of models used to compute, price, and hedge counterparty credit exposure for the Investment Bank. The team is also responsible to build the strategic portfolio to compute exposures, which are used by Risk Control. Giovanni graduated from the University of Trieste and received his PhD from ETH Zurich.



Yann Costanlem, Managing Director, Head Of The Multi-Asset Quantitative Analysis Group CITI INSTITUTIONAL CLIENT GROUP

Yann Costanlem is a Managing Director in Citi Institutional Client Group and head of the Multi-Asset quantitative Analysis Group. He joined the Arbitrage Desk of Salomon Brothers in London in 1994. His current responsibilities include research, development and trading support for the Hybrid and Multi-Asset Derivatives desk, the Commodity desk, Prime Brokerage globally and Counterparty Credit risk for Global Capital Markets. MAOs key responsibility is to help these businesses at all stages of a new product development cycle: structuring and marketing, analysis of key risk factors and market inputs, modeling and pricing, integration in various front end technology platforms, risk management, market value adjustments, model validation, credit approval, VaR, economic capital, quantitative strategies, etc. Amongst various activities outside Citi, Yann is the Executive Director of a think tank, the Club Praxis, which focuses on economic and social reforms in France. He graduated in Mathematics from Ecole Nationale Supérieure d'Informatique et de Mathématiques Appliquées de Grenoble (ENSIMAG), and from Hautes Etudes Commerciales (HEC) in Paris.

Josh Danziger, Principal, VALERE CAPITAL PARTNERS LLP

Josh is one of the founding Principals of Valere Capital Partners, a specialist consultancy focusing on fixed income derivatives and commodity credit. Before that, Josh was Head of Structured Products at Royal Bank of Canada, responsible for structured rates, inflation, credit derivatives and principal finance. He holds a PhD from Cambridge University, his thesis concerned the computer modelling of the chemical interactions between proteins and drugs at a molecular level.



Joe Holdemess, Managing Director, Global Head Of Investment Bank Credit Portfolio Group JPMORGAN CHASE

Joseph Holdemess is currently Managing Director, Global Head of Investment Bank Credit Portfolio Group for JP Morgan Chase. Prior to joining Chase, he was head of Financial Engineering for Baring Securities in London, and before that held positions in quantitative analysis and arbitrage strategy at County NatWest and BARRA.

18.30 Audience Q&A & Industry Round Up

18.40 Champagne Roundtable Discussion Groups

Stream B:

Enhanced Volatility Modelling & Trading

11.00

The Variational Most-Likely-Path And Its Applications

- Local volatility in terms of implied volatility
- Implied volatility in terms of local volatility
- The BBF approximation
- The variational most-likely-path
- An efficient fixed-point algorithm
- Numerical tests with a realistic volatility surface
- Some applications



Jim Gatheral, Professor, Department Of Mathematics BARUCH COLLEGE, CUNY

Jim Gatheral is professor of mathematics at Baruch College, CUNY teaching mostly courses in the Masters of Financial Engineering (MFE) program. Prior to joining the faculty of Baruch College, Jim was a Managing Director at Bank of America Merrill Lynch, and also an adjunct professor at the Courant Institute for Mathematical Sciences, New York, where for many years he co-taught popular classes in the Masters Program of Mathematics in Finance. Prior to 2005 he headed the Equity Quantitative Analytics groups at Merrill Lynch. Over his long career in the financial markets, he has been involved at one time or other in all of the major derivative product areas as bookrunner, risk manager and quantitative analyst. Jim has a BSc in mathematics and natural philosophy from Glasgow University and a PhD in theoretical physics from Cambridge University. His research focus is on volatility modelling and modelling equity market microstructure for algorithmic trading. His best-selling book, *The Volatility Surface: A Practitioner's Guide* (Wiley 2006) is one of the standard references on the subject of volatility modelling.

11.40

Exploring A New Model Of Stochastic Volatility With Jumps

- Capturing stochastic volatility and gap risk
- Analytically tractable pricing of vanilla and forward starting options
- Efficient valuation of first generation exotics
- FX Calibration example

Martijn Pristorius*Reader In Mathematics***IMPERIAL COLLEGE LONDON**

Martijn Pristorius completed his Ph.D in 2003 at the University of Utrecht. His research expertise lies in applied probability, stochastic processes, and applications of stochastic analysis in mathematical finance. He is Reader at the Department of Mathematics at Imperial College London, and is Programme Director of the MSc in Mathematics and Finance at Imperial. Several of the MSc and PhD students that he has supervised have gone on to forge successful careers in quantitative research in the financial industry.

12.20

Calibration Of Stochastic And Local Stochastic Volatility Models

- Fast and robust algorithms for Large Scale Purposes
- Techniques to speed up SV least squares minimizations
- LSV calibration methods and examples in Equities

**Jan H. Maruhn**

Quantitative Researcher For Equities, Commodities & Funds UNICREDIT

Jan H. Maruhn is working as a quantitative researcher for equities, commodities and funds in the Corporate and Investment Banking division of UniCredit. His scientific interests focus on optimization in finance as well as the pricing and hedging of derivatives. Jan holds a PhD, diploma and Master of Science in mathematics, with emphasis on numerical analysis and mathematical finance.

13.00

Audience Q&A & Industry Round Up

13.10

Lunch & Networking Break

14.30

An Efficient Implementation Of Stochastic Volatility By The Method Of Conditional Integration

- Uncorrelated stochastic volatility
- Accounting for non-zero correlation
- Application: fast and accurate SABR (process vs approximation) calculations
- The forward smile distribution and the expected forward smile
- Correlated stochastic volatility processes
- Application: cross FX options and correlation swaps

**William McGhee***Head Of Hybrid Quantitative Research***REBS**

William McGhee is a Managing Director and Head of Hybrid Quantitative Research at the Royal Bank of Scotland Group in London. William started his career at JP Morgan as a member of the Derivatives Research Group focusing on Foreign Exchange. He went on to run the FX Product Development team at Deutsche Bank and the FX Quantitative Strategy group at Cit.

15.10

Farkas Lemma & Spread Options

- Existence of a joint distribution that matches marginals and the distribution of the spread
- Connection to Farkas lemma
- Constructing joint distribution using various methods
- Impact on other (index, non-standard spread) options

**Vladimir Piterberg**

Global Head Of Quantitative Analytics Group BARCLAYS CAPITAL

Vladimir Piterberg is a Managing Director and the Head of Quantitative Analytics at Barclays Capital. Before joining Barclays Capital in March 2005, he was a co-head of quantitative research for Bank of America, where he had worked for 8 years. Vladimir Piterberg's main areas of expertise are the modelling of exotic interest rate and hybrid derivatives.

15.50

Audience Q&A & Industry Round Up

16.00

Afternoon Tea

16.30

Finite Difference Based Calibration & Simulation Of Stochastic Local Volatility Models

- Forward and backward PDEs
- Forward and backward finite difference schemes
- Application to calibration
- Finite difference schemes as Markov chains
- Application to simulation

**Jesper Andreasen**

Global Head Of Quantitative Research DANSKE BANK

Jesper Andreasen heads the Quantitative Research Department at Danske Bank in Copenhagen. Prior to this, Jesper has held positions in the quantitative research departments of Bank of America, Nordia, and General Re Financial Products. Jesper's research interest include: term structure modeling, volatility smiles, and numerical methods. In 2001 Jesper received Risk Magazine's Quant of the Year award.

17.10

Market Update: Attractive Trading Opportunities & Current Investor Focus Areas In Equity Volatility**Pete Clarke**

European Head of Equity Derivatives Strategy CITI

Pete Clarke is Citi's European Head of Equity Derivatives Strategy, based on the trading floor in London. He has been with Citi since 2006. Pete previously worked at Drescher Kleinfort Wasserstein in a similar strategy role, and before that spent a number of years as a strategic consultant to the energy and utility industries.

17.50

Panel Discussion**VOLATILITY TRADING PANEL****Examining The Latest Strategies For Successful Volatility Trading****Euan Sinclair***Trader***BLUEFIN TRADING**

Dr Euan Sinclair is an option trader with over fifteen years of professional trading experience. He has traded options on indices, stocks, commodities and interest rate products. He currently works on strategy design and is the risk manager at Bluefin Trading. He holds a PhD in theoretical physics from the University of Bristol and has written two books, "Volatility Trading" and "Option Trading", both published by Wiley.

**Peter van Kleef***Partner***LAKEVIEW CAPITAL MARKET SERVICES**

Prior to his role at Lakeview, Peter managed significant hedge fund type investment portfolios and quantitative trading departments for among others Cooper Neft, Salomon Brothers, Hypovereitbank and Credit Lyonnais. He has over 15 years of experience in the development and running of sophisticated automated trading operations. He holds a MBA degree from the Owen Graduate School at Vanderbilt University, Nashville, USA.

**Peter Carr***Global Head Of Market Modelling***MORGAN STANLEY***& Director, Masters In MF Program, NYU*

Dr. Peter Carr is a Managing Director at Morgan Stanley in New York. He is also the Executive Director of the Masters in Mathematical Finance program at NYU's Courant Institute. Prior to his current positions, he headed quantitative research groups for 10 years at Bloomberg and at Banc of America Securities. He was also a finance professor for 8 years at Cornell University, after obtaining his PhD in finance from UCLA in 1989. Conducting research in the interface between academia and industry, he has published extensively in both academic and industry-oriented journals. He is currently the treasurer of the Bachelor Finance Society and an associate editor for 8 journals related to mathematical finance. He recently won the ISA Medal for Science for the CGMY model from the University of Bologna and has been named the 2010 IAFET SunGard Financial Engineer of the Year. Previous awards are from Wilmut Magazine for Cutting Edge Research and from Risk Magazine for "Quant of the Year".

18.30

Audience Q&A & Industry Round Up

18.40

Champagne Roundtable Discussion Groups

Stream C:

New Innovations In Indexes & Portfolio Optimisation

11.00

Model Risk Management

- Assessing model risk. Model losses in past crisis and prescriptions from regulators. A practical case study
- How to measure model risk. Construction of worst-case and best-case models. Families of models
- Model risk management. Hedging, illiquidity and arbitrage. Model reserves or model limits/lines
- Stress-testing models and using models for stress-testing. Examples on correlations in pricing

Massimo Morini

Head Of Credit Models & Coordinator Of Model Research, BANCA IMI

Bio on pg. 4

11.40

Bespoke Model Validation

- Model validation philosophy
- Provisions as a way to reconcile front office and risk interests
- Examples of bespoke model validation: double-no-touch options, faders

**Alberto Elices***Senior Quantitative Analyst, Risk Department***SANTANDER**

A. Elices earned a PhD in Power Systems engineering at Pontificia Comillas University (Madrid, Spain) and a Masters in Financial Mathematics in the University of Chicago. He is a senior quant team member in the model validation group of the Risk Department at Grupo Santander in Madrid after working in a hedge fund in New York.

12.20

Towards A Theory Of Calibration

- Sequential calibration
- Parametrizing a matrix with a vector
- Payoff dependent dynamics vs dynamical consistency

Peter Carr, Global Head Of Market Modelling**MORGAN STANLEY***& Director, Masters In MF Program, NYU*

Bio available to view above.

13.00

Audience Q&A & Industry Round Up

13.10

Lunch & Networking Break

14.30

Separately Modelling The Bid & Ask Price For More Dynamic Calculation Of Capital Requirements For Trades**Dilip Madan***Professor Of Mathematical Finance***ROBERT H. SMITH SCHOOL OF BUSINESS, UNIVERSITY OF MARYLAND**

Dilip Madan specializes in Mathematical Finance. Currently he serves as a consultant to Morgan Stanley, Caspian Capital LLC, Citigroup and Bloomberg and has also consulted for the FDIC and Wachovia Securities. He is a founding member and immediate Past President of the Bachelor Finance Society, recipient of the 2006 von Humboldt award in applied mathematics, Managing Editor of Mathematical Finance and the Review of Derivatives Research, Associate Editor for the Journal of Credit Risk, and Quantitative Finance. His work is dedicated to improving the quality of financial valuation models, enhancing the performance of investment strategies, and advancing the understanding and operation of efficient risk allocation in modern economies.

15.10

Implied Liquidity & The Hedging Of Liquidity Risk

- The world of two prices: bid and ask price calculation by conic finance
- Implied liquidity: isolating and quantifying liquidity risk
- Liquidity sensitivity of financial products
- Hedging liquidity risk
- Towards stochastic liquidity modeling and liquidity trading



Wim Schoutens
Research Professor
CATHOLIC UNIVERSITY OF LEUVEN

Wim Schoutens is a research professor in financial engineering in the Department of Mathematics at the Catholic University of Leuven, Belgium. He has extensive practical experience of model implementation and is well known for his consulting work to the banking industry and other institutions. He is an expert advisor to the European Commission (DG-Competition) on "State aid assessment of valuation of impaired assets and of asset relief measures." Wim is author of the Wiley books "Lévy Processes in Finance: Pricing Financial Derivatives" and "Lévy Processes in Credit Risk: Lévy is the author of Lévy Processes in Finance, Lévy Processes in Credit Risk and The Handbook of Convertible Bonds: Pricing, Strategies and Risk Management and is co-editor of Exotic Option Pricing and Advanced Lévy Models all published by Wiley. He is Managing Editor of the International Journal of Theoretical and Applied Finance and Associate Editor of Mathematical Finance, Quantitative Finance and Review of Derivatives Research.

15.50

Audience Q&A & Industry Round Up

16.00

Afternoon Tea

16.30

Real World vs. Risk Neutrality: Application To Risk, CVA & Capital

- Variance predictor: historic volatility vs. implied
- Expectation predictor: role of market forwards and alternatives
- Limitations of stochastic processes
- Dynamics of realised vs. forward asset values

Vladimir Chorniy, Head of Market & Counterparty Risk Analytics
Group Risk Management, **BNP PARIBAS**

Lee Moran, Deputy Head of Market & Counterparty Risk
Analytics Group Risk Management, **BNP PARIBAS**

17.10

Emergent Optimal Hedges

- Minimum-variance hedging
- The yield curve example
- Instrument hedging
- Underdetermined search
- Choice of calibration specification



Tom Hyer, Head of Quantitative Analytics, **UBS**

Tom Hyer is the head of Quantitative Analytics at UBS. He obtained a B.A. from Rice and a Ph.D. from Stanford before beginning his analytics career at Bankers Trust; he subsequently worked at First Union before joining UBS in 2001. He is perhaps best known as the author of "It's About Forward Vol", a seminal analysis of calibration techniques for interest rate models, and more recently of the book Derivatives Algorithms. He has devised and implemented models for Libor, bond, equity, credit, FX, cross-currency and hybrid products, as well as languages for trade description, hedge computation and run-time extensions. His current focus is on unification of cross-asset quant operations, real-time data handling, and enterprise-level analytics issues.

17.50

Tail-Risks & Dynamic Portfolio Allocation

- Fluctuations & clustering of risks, and persistent tail-risks
- Post-mortem of diversify-buy-hold strategy & "modern-portfolio-theory"
- Can portfolio allocation hasten the decay of the return fat tails?
- Diversified target volatility exposures to global market trends



Vivek Kapoor, Multi-Asset & Hybrids Trader, **CITI**

Vivek is responsible for creating systematic investment & hedging strategies spanning multiple asset classes. These strategies include trading directional exposures within a dynamic portfolio allocation approach, and equity & credit volatility & correlation risk-premiums. Vivek has worked in capital markets trading & risk management roles since 2000. He received his PhD from MIT for research on dispersion & uncertainty of transport phenomena in random porous media.

18.30

Audience Q&A & Industry Round Up

18.40

Champagne Roundtable Discussion Groups

The Latest Developments In Derivatives Regulation & Capital Requirements

11.00

Understanding The Implications Of The Proposed Regulatory Initiatives On Central Clearing For Financial Services Firms

Stacy Coleman, Vice President, Financial Infrastructure
Department, Bank Supervision Group
FEDERAL RESERVE BANK OF NEW YORK

Bio on pg. 5

11.40

The Three Cs Of OTC Derivatives: Collateral, Clearing & Counterparty Risk



Rama Cont, Director,
Centre For Financial Engineering
COLUMBIA UNIVERSITY

Rama Cont is also the Senior Research Scientist in Mathematics at CNRS (Paris) and a founding partner of Finance Concepts, a risk advisory firm based in Paris and New York. His research has focused on computational methods in finance, jump processes and heavy-tailed models of financial risk, credit risk, systemic risk and counterparty networks. He has co-authored several books on quantitative finance including "Financial Modeling with Jump Processes" (CRC Press, 2003) and "Frontiers in Quantitative Finance: volatility and credit risk modeling" (Wiley, 2008). He is the Editor-in-Chief of the Encyclopedia of Quantitative Finance (Wiley, 2010).

12.20

Thinktank Session

CENTRAL CLEARING UNDER THE MICROSCOPE

What Does It Mean For Derivatives Modelling, Pricing & Business Strategies?

Jon Gregory, Partner
SOLIM FINANCIAL PARTNERS

Bio on pg. 4



Marco Avellaneda, Professor Of Mathematics,
COURANT INSTITUTE OF MATHEMATICAL SCIENCES, NEW YORK UNIVERSITY

Marco Avellaneda is currently Professor of Mathematics and Director of Division of Financial Mathematics at New York University's Courant Institute of Mathematical Sciences. He began his Wall Street career as vice-president in the Morgan Stanley Derivative Products Group. Subsequently, he was portfolio manager in equity volatility Strategies at Gargyle Strategic Investments LLC, Head of Volatility Arbitrage at Capital Fund Management, where he managed the Nimbus Fund, and, more recently, Portfolio Manager in quantitative equity strategies at the Galleon Group in New York. He is known in academic finance as the inventor of the Uncertain Volatility model and for his work on the Weighted Monte Carlo algorithm and the theory of Dispersion Trading, as well as for several other papers in quantitative finance and derivatives. Marco has extensive experience in the fields of derivatives, quantitative strategies in equities and volatility trading from the point of view of hedge funds and Wall Street firms. He is also in the editorial boards of Communications on Pure and Applied Mathematics, the International Journal for Theoretical and Applied Finance and Quantitative Finance. He has authored the textbook Quantitative Modelling of Derivative Securities: From Theory to Practice, and edited several other books and conference proceedings.

Rama Cont

Director, Centre For Financial Engineering
COLUMBIA UNIVERSITY

13.00

Audience Q&A & Industry Round Up

13.10

Lunch & Networking Break

13.40

Design & Analysis Of Contingent Capital

- Overview of alternative regulatory proposals for contingent capital and actual issuances to date
- Valuing debt that converts to equity in a crisis
- Comparing market-based triggers and regulatory capital triggers
- The impact of capital ratios and recovery rates on valuation



Paul Glasserman
Jack R. Anderson Professor
COLUMBIA BUSINESS SCHOOL

Paul Glasserman is the Jack R. Anderson Professor at Columbia Business School and a visiting scholar at the Federal Reserve Bank of New York, and he currently chairs the Education Committee of PRMIA, the Professional Risk Managers International Association. His publications include the book "Monte Carlo Methods in Financial Engineering", which received the 2006 Lanchester Prize, and he is also a recipient of Risk's 2007 Quant of the Year Award.

15.10

Is Standardisation The Enemy Of Innovation?: Assessing The Impact Of Moves Towards Standardization On Financial Products, Incentives & Future Innovation

Speaker tbc

15.50

Audience Q&A & Industry Round Up

16.00

Afternoon Tea

16.30

BASEL III MASTERCLASS

Session 1: 40 minutes

Assessing The Impact Of The Comprehensive Risk Measure (CRM) On The Correlation Business Under Basel III

- Modelling the Dynamics of the Correlation Skew
- Relating Modelling Assumptions back to the Empirical Data
- Implementation Challenges
- Implications for Pricing and Risk Management

David Shelton

Director, Co-Head Of Credit Derivatives Research

BANK OF AMERICA MERRILL LYNCH

Within Credit Research David's main interests are pricing and hedging of CDOs and correlation products counterparty risk and dynamic models of credit risk. Since 1998 David has worked as a quantitative analyst on FX, hybrid FX interest rate and Credit products. Before that David was a postdoctoral theoretical physicist in Canada and Oxford for 2 years, after receiving a DPhil in Theoretical Physics from the University of Oxford.

Session 2: 40 minutes

Incremental Risk Charge & Comprehensive Risk Measure: Designing A New Market Risk Management Framework

- Methodological issues: a numerical puzzle, backtesting of the model
- How to make the model validated?
- Basel 2 culture in the market world: is market risk management going to change?



Vivien Brunel
Head Of Economic & Regulatory Capital
SOCIÉTÉ GÉNÉRALE

Généraliste in 2001 where he was working on the RAROC project. In 2006 he joined SGAM Alternative Investments as a credit structurer. He is now head of Economic and Regulatory Capital at Société Générale, his team is in charge of securitisation, operational risk, pillar 2 models (economic capital, stress testing) and risk appetite methodologies. Vivien is also assistant professor at Ecole des Ponts ParisTech, a top French Grande Ecole.

17.50

The Theory Of Granularity Adjustments Revisited: How To Value & Risk Manage A Book Of Credit-Sensitive Instruments Without Simulations?

- Basics about granularity theory
- The mathematics behind the main idea
- Expansion to multi-factor models
- Application to risk measure calculations



Jean-David Fernanjan
Professor Of Finance & Statistics
CREST/ENSAE

Previously, Jean-David was Senior Credit Derivatives Quant at BNP-Paribas (London). Just prior to joining BNP-Paribas, he was the Head of risk methodologies at Ixis CIB (Paris). His research interests include particularly survival analysis, credit portfolio modeling and copulas. He has published numerous articles in economics, statistics and financial economics.

18.30

Audience Q&A & Industry Round Up

18.40

Champagne Roundtable Discussion Groups

Main Conference: Day 2 Wednesday 13 April 2011

08.30

Morning Coffee

Stream A:

The Latest Counterparty Risk, Collateral & Correlation Modelling Techniques

09.00

Understanding How Collateral Is Modelled, How It Interacts With The Trade & How It Is Included In Counterparty Risk

- Understanding and modelling collateral payments when calculating CVA/DVA
- The role of clearing houses
- Market changes to discounting using OIS curves for collateralised trades and the implications for CVA/DVA



Faisal Yousaf
Global Head Of Quantitative Risk & Valuation Group
HSBC

Faisal's PhD under the supervision of Professor Chris Rogers, examined Probability Theory applied to problems from the Financial Markets. Since 2001 he has held various positions at HSBC Investment Bank based in Canary Wharf London and he took up his current position as Global Head, Quantitative Risk and Valuation Group in June 2008. Faisal has had extensive exposure to modelling and pricing problems within FX, Fixed Income, Credit, Equity and Hybrid Derivatives. His current role spans issues across all of these asset classes.

09.40

Trading CSAs

- Aggregation of different CSAs in a trading book
- Pricing non-standard CSAs
- Gap risks and bad correlations
- Cost of initial margin in central clearing



Hans-Peter Schöch, Director,
Structured Rates Trading, **NOMURA**

Hans-Peter has over ten years of industry experience in trading fixed income derivatives. He is working as a senior trader on the structured rates trading desk at Nomura in London. He is responsible for risk managing the EUR exotic rates trading book. In prior roles he held responsibilities for USD rates exotics and hybrids trading books.

10.20

A Unified Approach To Correlation CVA & Collateral Dynamics

- Introduction: SPV issuance for CDO tranches
- Liability CVA & FVO modelling
- Collateral depletion as a Stopping-Time problem
- Collateral Dynamics: a Jump-Diffusion process
- Correlation between the Collateral and the CDO: the Feedback effect
- Applications



Youssef Elouerkhaoui, Managing Director,
Global Head Of Credit Derivatives Quantitative
Research, **CITI**

Youssef Elouerkhaoui is the Global Head of Credit Derivatives Quantitative Research at Citi. His group supports all aspects of product development and modelling across desks, this covers: credit trading, correlation trading, CDOs, credit exotics and emerging markets. Prior to this, he was a Director in the Fixed Income Derivatives Quantitative Research Group at UBS, where he was in charge of developing and implementing models for the Structured Credit Derivatives Desk. Before joining UBS, Youssef was a Quantitative Research Analyst at Credit Lyonnais supporting the Interest Rates Exotics business. He has also worked as a Senior Consultant in the Risk Analytics and Research Group at Ernst & Young. He is a graduate of Ecole Centrale Paris, and he holds a PhD in Mathematics from Paris-Dauphine University.

11.00

Audience Q&A & Industry Round Up

11.10

Morning Coffee & Networking Break

11.40

EXTENDED SESSION

Correlations In Asynchronous Markets

- Deriving correlation estimators for asynchronous markets
- Historical behaviour of correlations: S&P500, Stox500, Nikkei
- Comparison with common heuristic estimators
- Pricing correlation swaps
- Materializing correlations larger than 100%



Lorenzo Bergomi
Head Of Quantitative Research, Global Markets,
SOCIÉTÉ GÉNÉRALE

Lorenzo Bergomi has been with SG since 1997. Originally trained in electrical engineering, Lorenzo obtained a PhD in theoretical physics in the theory group at CEA, Saclay, France, then spent two years in the physics department of MIT before joining SG. While his initial focus was on equity derivatives, his current mandate is global.

13.00	Audience Q&A & Industry Round Up
13.10	Lunch & Networking Break
14.30	

Extending Dupire-Local Volatility To Incorporate Non Trivial Behaviour Of Correlation

- We provide evidence that equity index option markets have encoded non-trivial correlation structures between its components known as "correlation skew"
- We show how this information can be extracted and built into a consistent modelling framework by making correlations dynamic variables of the portfolio
- We propose a generalization of Dupire's local volatility model called "Local Correlation Model" (LCM) that is achieving consistency with both: the constituent as well as the index options markets
- We link the results to "systemic" risk of a portfolio



Alex Langnau, Global Head Of Quantitative Analytics ALLIANZ INVESTMENT MANAGEMENT

Alex Langnau is Global Head of Quantitative Analytics at Allianz Investment Management. He is also Visiting Scientist at the Ludwig-Maximilians University Munich. Prior to this he held various roles across the industry including Global Head of Quants across asset classes at Dresdner Bank, Global Head of Equity Derivatives Modelling at Merrill Lynch and Global Head of Exotic Equity Derivatives Modelling at Goldman Sachs. He started his career as a member of the Global Analytics team at Bakers Trust/Deutsche Bank. He holds a PhD in Theoretical Physics from the Stanford Linear Accelerator Center and completed his post-doc in the area of Theoretical Particle Physics at Cornell University. His current research interests include dynamic modelling of correlations and high frequency trading strategies.

A Local Correlation Model: Motivation & Practical Implementation

- Pricing and risk management for multi asset derivatives
- Local correlation models: calibration and estimation
- Comparing the overhead to classical multi local volatility
- Calibration: using the fixed point algorithm as an effective tool in practice
- Usage: using a dimension extension to avoid time consuming path generation

Adil Reghai, Head Of Equity, Commodity & Arbitrage Research NATIXIS

Adil Reghai is an alumni of Ecole Polytechnique of Paris and Ecole des Mines of Paris. Adil has worked as a senior quant and head of research in several houses such as BNP Paribas, Merrill Lynch, Dresdner Kleinwort Benson and Cayan. Now Adil is in charge of the Equity and Commodity and Arbitrage Research with Natixis based in Paris.

15.50	Audience Q&A & Industry Round Up
16.00	Afternoon Tea
16.30	

Dispersion, Volatility & The Dynamics Of Correlation

- Signatures of market panics on multiple time-scales
- The memory structure of correlation
- Interaction between volatility and correlation
- Implications for trading and hedging



Lisa Borland, Director Of Derivatives Strategies EVINNE & ASSOCIATES

Lisa Borland is currently Director of Derivatives Strategies at Evinne & Associates, Inc., a San Francisco based hedge fund. She received her Doctorate in Theoretical Physics from the University of Stuttgart, Germany after some years of working in academia she moved in to the field of finance. She has many publications, and her most notable work has probably been the development of a theory for non-Gaussian option pricing. However, her main interest is more general; namely to try and understand the dynamics of financial markets, and apply that knowledge to trading strategies and risk control.

A Comparative Analysis Of Correlation Approaches In Finance

- Analysis of the correlation models: Binomial, Correlating Brownian motions, Copulae, Conditionally independent modeling (CID), Contagion modeling, Markov modeling and stochastic time change
- Should we model bottom-up or top-down?
- Can we blame the 2007/2008 crisis on the Copula?
- So what's the best correlation model?



Gunter Meissner, Director MFE Program, UNIVERSITY OF HAWAII

After a lectureship in mathematics and statistics at the Economic Academy Kiel, Gunter Meissner PhD joined Deutsche Bank in 1990, trading interest rate futures, swaps and options in Frankfurt and New York. He became Head of Product Development in 1994, responsible for originating algorithms for new derivatives products, which at the time were Lookback Options, Multi-asset Options, Quanto Options, Average Options, Index Amortizing Swaps, and Bermuda Swaptions. In 1995/1996 Gunter Meissner was Head of Options at Deutsche Bank Tokyo. From 1997 to 2007 Gunter was Professor of Finance at Hawaii Pacific University. Currently, he is President of Derivatives Software, Adjunct Professor of Mathematical Finance at NYU and Director of the Master in Financial Engineering program at the Shidler College of Business at the University of Hawaii. Gunter Meissner has published numerous papers on derivatives and is a frequent speaker at conferences and seminars. He is author of 4 books, including his 2008 edition: "The Definitive Guide to CDOs - Application, Pricing, and Risk Management"

17.50	Audience Q&A & Industry Round Up
18.00	Champagne Roundtable Discussion Groups
18.30	The Global Derivatives Trading & Risk Management Cocktail Party

Cutting-Edge Innovations In Interest Rate Modelling

Multiple Curve Construction For Interest Rate Derivatives: Overcoming The Challenges Of Forecasting & Discounting Off Different Curves

- From textbooks to reality - the need for multiple related curves
- Distinguishing between instrument & curve dependence
- Pricing & risk consequences of interpolation choices in multi-curve systems
- Calibration: Speed and accuracy
- Applications to funding modelling

Igor Smimov, Global Head Of Flow Research Group, BNP PARIBAS Igor is responsible for quantitative research and modelling of flow products across Fixed Income (including Interest Rates, Credit, Mortgages and other product areas) at BNP Paribas. He has tackled a number of research areas during his career, with a long standing focus on term structure modelling and risk dimensionality issues, and more recently liquidity, funding and counterparty risks.

On The Term Structure Of Interest Rates With Basis Spreads, Collateral & Multiple Currencies

- Construction of swap curves under the presence of collateral and various basis spreads
- No-arbitrage dynamics of the collateralized Libor forwards and basis spreads
- Choice of collateral currency

Akihiko Takahashi

Professor, Graduate School of Economics UNIVERSITY OF TOKYO

Graduated from the Faculty of Economics, University of Tokyo. Received his Ph.D. from the Haas School of Business, University of California at Berkeley. After working for the Industrial Bank of Japan and Long Term Capital Management, started as Associate Professor at the Graduate School of Mathematical Sciences, University of Tokyo and later joined the Graduate School of Economics in 2003. Has been Professor in 2007.

Parsimonious HJM Models For Multiple Yield-Curve Dynamics

- Stylized facts on money market rates
- Volatility constraints for yield curve dynamics
- Multiple-curve HJM framework
- Calibration examples
- Implying swaption volatility surfaces for different Libor tenors
- Conclusion and further developments



Andrea Pallavicini Head Of Financial Engineering BANCA LEONARDO

Andrea Pallavicini is Head of Financial Engineering at Banca Leonardo in Milan. Previously, he was Head of Equity and Hybrid Models in Banca IMI, working also on dynamical loss models, interest-rate derivatives, smile modelling and correlation basis. He obtained a degree in Astrophysics, and a Ph.D. in Theoretical and Mathematical Physics from the University of Pavia.

11.00	Audience Q&A & Industry Round Up
11.10	Morning Coffee & Networking Break

Libor Market Models With Stochastic Basis

- Stylized facts of the interest rate market
- Using different LIBOR and discount (OIS) curves
- Extending the LMM to the multi-curve case
- Modelling stochastic basis
- Deriving closed-form formulas for caps and swaptions
- Modeling correlation between OIS rates and basis spreads



Fabio Mercurio Senior Product Manager BLOOMBERG

Fabio Mercurio is a senior product manager at Bloomberg LP New York. Previously, he was the Head of the Financial Engineering at Banca IMI, Milan. He holds a BSc in Applied Mathematics from the University of Padua and a Ph.D. in Mathematical Finance from the Erasmus University of Rotterdam. His recent scientific interests include interest rate and inflation modelling for pricing and hedging exotics, the pricing of hybrids and the smile modelling for different asset classes. Fabio has published extensively in books and international journals, including 10 cutting-edge articles in Risk Magazine. He also jointly authored the book "Interest rate models: theory and practice".

Expansion Techniques In Interest Rate Modeling

Alexander Antonov

Senior Vice President, Quantitative Research NUMERIX

Alexander Antonov got his PhD degree from the Lundau Institute for Theoretical Physics in 1997 and joined Numerix LLC in 1998 where he currently works as a Senior Vice President of Quantitative Research. His activity is concentrated on modeling and numerical methods for interest rates, cross currency, hybrid and credit.

13.00	Audience Q&A & Industry Round Up
13.10	Lunch & Networking Break

Looking (Again) At Caplets Versus Swaptions Using The LMM-SABR Model

- Establishing the relative value of swaptions versus caplets
- Using no-arbitrage conditions to find bounds for swaption prices
- A virtual model-replicating static super-replicating strategy
- Unlocking how the market prices swaptions in practice



Riccardo Rebonato

Head Of Front-Office Risk Management & Head Of Quantitative Analytics, GBM

RBS Bio on pg. 4

No Arbitrage SABR

- The trouble with expansions
- Numerical solution by finite difference and comparison with expansions
- Numerical solution by one-time-step finite difference
- Second order accuracy and complex time
- Comparison of accuracy, stability, and computational time with expansions and full finite difference solution



Jesper Andreasen Global Head Of Quantitative Research DANSKE BANK

Bio on pg. 4

Brian Hugel

Chief Quantitative Analyst DANSKE MARKETS

15.50	Audience Q&A & Industry Round Up
16.00	Afternoon Tea

Practical Application Of SABR Volatility Curves

- Replication in the presence of pronounced SABR volatility smile
- Joint dynamics of CMS underlyings
- Co-dependency in CMS spread option models
- Risk management of correlated derivative products



Dong Qu, Global Head Of Quants, UNICREDIT

Dong Qu is the global head of quants at UniCredit. He previously worked at banks including HSBC, Nikko and Santander. His main work has been on the quantitative pricing and hedging models for structured derivative business across major asset classes, including equity, fixed income, credit, FX and property. He is also experienced in many practical aspects of the derivative business, in particular sound and efficient management of derivative products within trading and risk infrastructures. He has a PhD in Statistical Optics from Imperial College London, and BSc in Physics from East China Institute of Technology.

Measuring Risk Premia In Rate Curves

- Modelling nominal interest rates
- Statistical estimation of the models: change of measure, Kalman filtering
- Incorporating inflation: a 4-factors model
- Measuring risk premia in nominal and real bonds
- What about credit risk?



Julien Turc, Head Of Quantitative Research, Cross-Asset, Research Group SOCIÉTÉ GÉNÉRALE CORPORATE & INVESTMENT BANKING

Julien is head of Quantitative Research within the Cross-Asset Research group at Société Générale Corporate & Investment Banking. The quantitative research team is active in global macro and relative value strategies, derivatives and structured products, and provides research to investors worldwide. Over the past 13 years, Julien's research has covered topics ranging from exotic credit derivatives pricing to statistical relative value and cross-asset strategies. Julien is a graduate of the Ecole Polytechnique and ENSAE and teaches credit derivatives at Paris VI University.

17.50	Audience Q&A & Industry Round Up
18.00	Champagne Roundtable Discussion Groups
18.30	The Global Derivatives Trading & Risk Management Cocktail Party

New Advances In Commodities Trading & Risk Management

Generic Commodities Exotics: Is A Model For Crude Any Use For Coffee And Copper?

Alan Stacey, Executive Director NOMURA

Alan Stacey worked for ten years as an academic probabilist, mainly in the pure mathematics department at Cambridge University but also as a professor at UCLA and elsewhere. He joined the financial sector in 2003, receiving excellent early mentoring from Mark Joshi and Riccardo Rebonato at RBS. He joined the front office interest rate quant team at Lehman Brothers in London in 2005 working for Zhenyuan Hu and very closely with the highly quantitative trading desk, and was there until the end. Since 2008 he has worked for Nomura and since early 2009 he has worked in the field of commodities exotics modelling and on a good day will have an idea which attracts the interest of his boss, Martin Baxter.

Option Pricing & Hedging By Risk Minimization With Multiple Factors & Transaction Costs

- Option pricing as a risky business
- Hedged Monte Carlo approach in a multi-factor setting
- Handling transaction costs
- Market-implied risk premia
- Examples of pricing and hedging of commodities options



Igor Halperin, Vice President In Quantitative Research, JP MORGAN

Igor Halperin is a Vice President in Quantitative Research at JP Morgan. He is responsible for model research in the areas of credit and commodities derivatives. Igor is also an adjunct professor at the department of Finance and Risk Engineering at NYU Poly. Igor holds a Ph.D. in Theoretical High Energy Physics, and has worked in physics before moving to finance.

Developing Efficient Jump Models To Identify & Understand Volatility In The Commodities Market

- 2 and 3 factor models of commodity futures prices driven by jump diffusions developed
- Long term (permanent market) and short term (transitory trading) jumps modelled differently
- Efficient new extended Kalman filter calibrates the models
- Jumps in historical calibration data identified and analyzed to give market understanding
- Options on futures priced in closed form to incorporate convenience yield volatility smiles and skewness resulting from short term jumps



Professor Michael Dempster, Founder Of The Centre For Financial Research, CAMBRIDGE JUDGE BUSINESS SCHOOL & Professor Of Mathematical Studies Emeritus

Michael A H Dempster is Managing Director of Cambridge Systems Associates Limited and Professor Emeritus, Centre for Financial Research, Department of Pure Mathematics and Statistics, University of Cambridge. Michael Dempster has taught and researched in leading universities on both sides of the Atlantic, including Oxford, Cambridge, Stanford, California-Berkeley, Princeton, Toronto and Rome, and is currently founding Editor-in-Chief of Quantitative Finance and an Associate Editor of Stochastics, Computational Finance and the Journal of Risk Management in Financial Institutions. Michael is Editor-in-Chief of the Oxford Handbooks in Finance and Co-Editor of the Chapman & Hall/JCRC Mathematical Finance Series. He has been consultant to a number of global financial institutions, corporates and governments and is regularly involved in executive education in financial engineering and risk management around the world. Author of over 100 published research articles in leading international journals, his books include Stochastic Programming, Derivative Securities (with S R Piskal), Risk Management: Value at Risk and Beyond and Quantitative Fund Management (with G Mitra and G Pflug). His work has won several awards and he is an Honorary Fellow of the UK Institute of Actuaries.

11.00	Audience Q&A & Industry Round Up
11.10	Morning Coffee & Networking Break

11.40

New Classes Of Markovian Factor Models With Stochastic Volatility & Jumps for Commodity Futures

- A broad class of diffusion mean-reverting and co-integrated Markovian factor commodity futures price models
- A new no-arbitrage model with bounded futures prices and the corresponding spot model
- Markovian factor futures curve models driven by jump processes
- Affine multifactor futures curve model with Heston stochastic volatility and mean-reversion
- Applications to crude oil and natural gas futures price curves

**Alex Levin, Director &****Head of Methodology, Market & Trading Credit Risk, ROYAL BANK OF CANADA**

Alex Levin holds a PhD in Numerical Mathematics from Dnipropetrovsk University, Ukraine. He was a Director of Risk Analytics in Bank of Montreal and Toronto Dominion Bank, Managing Director of Risk Analytics (Counterparty Credit Risk, VaR and Stress Testing, Specific Risk and Model Risk) in Wachovia Bank (2004-2007), and Principal Financial Engineer at Analytics Inc. Dr. Levin also taught various Risk Management and Numerical Quantitative Finance courses at the Master of Mathematical Finance Programs at University of Toronto, University of North Carolina at Charlotte and University of Leicester. His quantitative research covers stochastic volatility and jump process models in derivative pricing and Risk Management, Commodity and Counterparty Risk modelling, CVA, affine models for equity and volatility derivatives, and fat-tailed distributions for Market Risk.

12.20

The Impact Of Hedgers & Speculators On Long-Term Oil Prices

- Oil price spikes: fundamentals or speculation?
- Keynes' theory of normal backwardation
- Investors as macro-economic hedgers
- Storage operators as risk absorbers
- Modern theory of normal contango

Ilia Bouchouev, Managing Director, Global Head Of Energy Derivatives, KOCH SUPPLY & TRADING

For the last twelve years Ilia Bouchouev has been managing the global energy derivatives business for Koch Industries, the world second largest privately held company. Koch's energy derivatives group is one of the leading quantitative traders and liquidity providers for corporate endusers, and hedge funds. The group operates globally with trading desks in New York, Houston, Wichita (Kansas), Geneva, and Singapore. This team has pioneered a number of unique energy derivatives instruments and been recognized as a leading quantitative trader in commodities. Ilia has a PhD in Applied Mathematics, and has been a regular speaker at various industry conferences.

13.00 Audience Q&A & Industry Round Up

13.10 Lunch & Networking Break

14.30

Strategies For Overcoming Challenges In Energy Risk Management

- Commodity market price of risk and market price of volatility risk
- Modelling spot energy prices: from mean-reverting jump-diffusion to regime-switching models
- Pricing derivatives in incomplete/low-liquidity markets: e.g. interruptible contracts, load-following services
- Using the richness of energy markets' derivative structures
- The challenge of extrapolation

**Ehud I. Ronn, Practice Area Manager, Commodity Market Modelling, MORGAN STANLEY**

Ehud I. Ronn is the Practice Area Manager, Commodity Market Modelling at Morgan Stanley & Co. He joined the Firm Jan. 1, 2010. From July 1988 to Dec. 2009, Dr. Ronn served as professor of Finance at the University of Texas at Austin and from 1997 director of its Center for Energy Finance Education and Research. Dr. Ronn obtained his B.Sc. and M.Sc. in Economics at the Technion, the Israel Institute of Technology, and his Ph.D. in Finance from Stanford University. In addition to his other publications, he is the editor of Real Options and Energy Management. Using Options Methodology to Enhance Capital Budgeting Decisions published in 2002 by Risk Books, London. Prior to joining the University of Texas at Austin, Dr. Ronn was a faculty member at the University of California, Berkeley, and the University of Chicago. From 1991 to '93 he served as Vice President, Trading Research Group at Merrill Lynch & Co. In Nov. 2004, Dr. Ronn was one of fifty individuals selected by Energy Risk Magazine to the "Energy Risk Hall of Fame."

15.10

Shipping Markets & Global Commodities**Helyette Geman, Director Commodity Finance Centre UNIVERSITY OF LONDON & ESCP EUROPE**

Bio on pg. 4

15.50 Audience Q&A & Industry Round Up

16.00 Afternoon Tea

16.30

A New Approach For Efficient Modelling Of Forward Curves For Agricultural

Speaker tbc

17.10

Measuring Correlation Risk For Energy Derivatives

- Correlation in commodities markets
- Correlation risk
- Perturbation methods of correlation matrices
- Numerical examples

Roza Galeeva, Executive Director, MORGAN STANLEY

Roza Galeeva is an Executive Director at Morgan Stanley. She started her career at MS in 2005 in the Financial Control Group, working on models review and model control process. In 2010 she joined the Commodities Market Modelling Group. Roza Galeeva holds PhD in Mathematical Physics from Moscow State University. She has numerous papers on dynamical systems and applications in financial engineering and broad teaching practice in different universities over the world. She has extensive experience in modelling energy derivatives and risk management. Prior to MS she worked at Northeast Utilities and Williams.

17.50 Audience Q&A & Industry Round Up

18.00 Champagne Roundtable Discussion Groups

18.30 The Global Derivatives Trading & Risk Management Cocktail Party

Stream Dr:

New Techniques For Pricing & Hedging Hybrid Products

09.00

New Techniques For Modelling Hybrid Capital Securities

- Hybrid capital: an overview of the market, instruments, etc
- Market developments, regulation impact, some examples
- Potential risk factors
- Models: from simple to complex
- Empirical evidence

**Andrei Serjantov, Head, Flow Credit Research Group BNP PARIBAS**

Andrei Serjantov is currently heading up the flow credit research group at BNP Paribas. Prior to this, he was a quantitative analyst in the fixed income research team of BNP Paribas and Advanced Research Centre at State Street Global Advisors. Andrei holds a PhD and MA in Computer Science from the University of Cambridge.

09.40

Fast Calibration & Pricing Of Convertibles Using A Jump Diffusion Model With Stochastic Credit

- Stochastic Credit: the Equity-to-Credit Link (E2C)
- Modeling the main value drivers
- How the model treats features such as Dividend Protection, Cross
- Currency, Contingent Interest, etc; Non-economic Behaviour
- Fast calibration to listed options and CDS in the presence of E2C
- Implementation within the BLOOMBERG PROFESSIONAL® service

**David Frank, Head Of Quantitative Finance Development For Equities & Convertibles, BLOOMBERG**

David Frank is head of Quantitative Finance Development for Equities and Convertibles at Bloomberg. His group is responsible for design and implementation of the derivatives pricing models delivered on the BLOOMBERG PROFESSIONAL® service. David has been involved in derivatives pricing since the early 1980s, when he headed research and development for the pioneering derivatives software provider The Options Group.

10.20

Assessing The Pricing & Convergence Of Discretely Monitored Variance Derivatives & Volatility-Equity Hybrid Derivatives

- Pricing discretely monitored generalised variance swaps
- Pricing discretely monitored proportional variance swaps
- Pricing discretely monitored skewness swaps
- Convergence to continuously monitored counterparts
- Implications for trading and hedging

**John Crosby, Visiting Professor, UNIVERSITY OF GLASGOW & Executive Director UBS**

John began his career by trading FX options. He then moved to Monis (formerly London Business School Financial Software) where he wrote their pricing libraries for a wide range of exotic derivatives as well as co-writing their three-factor Convertible bond model, which captured stochastic equity prices, interest rates and default risk. He then headed quant teams at Barclays Capital and Lloyds where he developed derivatives models across all asset classes. He is best known for publishing several papers in the area of commodity and hybrid derivatives. John is a visiting Professor at Glasgow University and an invited lecturer on the M.Sc. course in Mathematical Finance at Oxford University as well as being an Executive Director in the front-office Fixed Income, Foreign Exchange and Commodity derivatives research and quantitative analysis team at UBS.

11.00 Audience Q&A & Industry Round Up

11.10 Morning Coffee & Networking Break

11.40

QUADRATIC VARIANCE SWAP TERM STRUCTURE MODELS:**How Can We Efficiently Capture Extreme Movements & Spikes Of Stochastic Volatility In Multi-Factor Diffusion Models**

- Introducing a quadratic term structure model for the variance swap rates
- Capturing nonlinear phenomena such as rare events and volatility clustering
- Model identification and specification analysis
- Testing the model with a cross section of variance swap rates and the S&P 500 Index
- Examining the statistical flexibility of quadratic models and their superiority over the affine class

**Damir Filipovic, Swissquote Chair Of Quantitative Finance & Swiss Finance Institute Professor, EPFL**

Damir Filipovic is the Swissquote Chair of Quantitative Finance and Swiss Finance Institute Professor at the Ecole Polytechnique Fédérale de Lausanne (EPFL). Formerly, he was on the faculty of the University of Vienna, the University of Munich, and Princeton University. He also worked for the Swiss Federal Office of Private Insurance as co-developer of the Swiss Solvency Test. Professor Filipovic's research focus is in quantitative finance and risk management. He holds a Ph.D. in mathematics from ETH Zurich.

12.20

The Cross-Asset Skew Modelling Challenge

- Cross-asset derivatives
- Issues with cross-asset derivatives
- Cross-asset skew
- Bringing the cross-asset skew solution to the desk

**Youssef Randjiou, Managing Director, Global Head Of Multi-Asset Derivatives Quantitative Research CITIGROUP**

Youssef holds a Ph.D. in Probability from Marc Yor's department at Paris VI University. He is also member of the French Institute of Actuaries. He has worked in quantitative research since 1997 at Credit Agricole Indosuez, ABN AMRO in the exotic interest rate derivatives business. He joined Deutsche Bank's Global Equities quantitative research group in London in June 2001. Since October 2003, he has been working at Citigroup where he is currently Global Head of the Multi-Asset Derivatives Quantitative Research team focussing on Multi-Asset derivatives, Equity-linked structures, Fund derivatives and CVA.

13.00 Audience Q&A & Industry Round Up

13.10 Lunch & Networking Break

14.30

The Price Of An Equity Variance Swap In A Model With Stochastic Interest Rates

- Deriving a model independent bound on the price of an equity variance swap when interest rates are stochastic
- Observing the bound is attained in the special case of flat vol

Per Horfelt, Equity Quantitative Analyst**BARCLAYS CAPITAL**

PhD in mathematics, presently working at Barclays Capital as an Equity PhD in mathematics. Previously worked at the FCC Research Center and Front Capital Systems.

15.10

Mixed Volatility Dynamics (MVD): Pricing & Calibration Of Long Dated Multi-Asset Products

- Market requirements for cross asset models
- Model choices and calibration approach
- MVD formulation and parameters
- Effects and usage of rates and credit dynamics, local and stochastic vol mixtures, correlated SV processes in multi-underlying products
- Examples of pricing and risk sensitivities

**Han Lee, Global Head Of Quantitative Research, RBS**

Han Lee is currently Global Head of Quantitative Research at RBS Global Banking and Markets, responsible for front office quant analytics and development across all asset classes. This covers derivative products, algorithmic solutions, and CVA analytics. Previously at derivatives software company Numerix, he headed the firm's European subsidiary and was also global head of quantitative research. Prior to that he was head of quant research for Global Fixed Income Structured Products at Commerzbank, and before that at Tokyo-Mitsubishi International (TMI) he headed the quant desk for the Exotics Derivatives Group. While at TMI he also managed an exotics trading book. He started as a quantitative analyst at NatWest Markets in interest rate derivatives. He received his Ph.D. in Theoretical Physics from the University of Cambridge.

15.50

Audience Q&A & Industry Round Up

16.00

Afternoon Tea

16.30

VARIABLE ANNUITIES MASTERCLASS

Session 1: 40 minutes

Variable Annuities: Insurance Pricing vs. Market-**Consistent Pricing**

- An optional view of VAs
- Biometric and behaviour risks
- Arbitrage opportunities
- Systemic risk: is there a VA bubble?

**Yves Lehmann, Managing Director****UBS INVESTMENT BANK**

Yves Lehmann, Managing Director, UBS Investment Bank oversees the global development of UBS's solutions for Variable Annuities, from reinsurance of existing blocks to new product design for retirement and pensions. Before joining UBS in 2010, Yves had been working with Société Générale since 1995, notably on the Lyxor alternative investment platform, alternative risk transfer, ALM solutions for financial institutions and European Variable Annuities. Yves graduated from Ecole polytechnique and Telecom ParisTech. He started his career with France Telecom and Eps, an international consultancy.

**Camilla Du Boulay, Executive Director****UBS INVESTMENT BANK**

Camilla is a senior structurer in the Global Equity Derivatives Group at UBS where she has responsibility for developing structured solutions for pension funds and the variable annuities industry. She has over 13 years of experience in investment banking, 10 of which have been spent with UBS covering pension solutions, mutual fund and hedge fund structured products (with specific expertise in delivery in UCITS format and advanced CPI techniques) and global portfolio trading. Camilla has a first in Mathematics from Oxford University and is a CFA charterholder.

Session 2: 40 minutes

Pricing Inflation-Linked Annuities

- Obtaining a joint calibration for year on year swaps and inflation options
- The auto-correlation of inflation rates
- Structuring inflation-linked variable annuities

**Alexander van Haastrecht, Co-Head Of Financial Engineering, DELTA LLOYD**

Alexander van Haastrecht holds a PhD in Financial Mathematics from the University of Amsterdam. He has worked both in the risk management and pricing of long-dated hybrid derivatives, and published in several international journals such as Quantitative Finance and International Journal of Theoretical and Applied Finance. Currently Alexander is the co-head of financial engineering at Delta Lloyd and he holds position as assistant professor at the VU University Amsterdam.

17.50

Audience Q&A & Industry Round Up

18.00

Champagne Roundtable Discussion Groups

18.30

The Global Derivatives Trading & Risk Management Cocktail Party

**Main Conference: Day 3
Thursday 14 April 2011**

08.20

Chairman's Opening Address

08.45

GUEST QUANT ADDRESS**The Role Of Mathematics In Finance: Relevance, Reliance, Robustness****Paul Wilmott, Author, Researcher, Educator and Founder Of wilmott.com**

Paul Wilmott is a financial consultant, specializing in derivatives, risk management and quantitative finance. He has worked with many leading US and European financial institutions. He is the author of Paul Wilmott Introduces Quantitative Finance (Wiley 2007), Paul Wilmott On Quantitative Finance (Wiley 2006), Frequently Asked Questions in Quantitative Finance (Wiley 2009) and other financial textbooks. He has written over 100 research articles in finance and mathematics. Paul Wilmott was a founding partner of the volatility arbitrage hedge fund Caissa Capital which managed \$170milion. His responsibilities included forecasting, derivatives pricing, and risk management. Dr Wilmott is the proprietor of www.wilmott.com, the popular quantitative finance community website, the quant magazine Wilmott and is the Course Director for the Certificate in Quantitative Finance.

09.15

GUEST ACADEMIC ADDRESS

The Neuroscience Of Risk & Reaction Times



John Coates, Senior Research Fellow In Neuroscience & Finance
UNIVERSITY OF CAMBRIDGE

After completing his PhD at the University of Cambridge, John Coates traded derivatives for Goldman Sachs and then ran a trading desk for Deutsche Bank. During the years of the Dotcom bubble he split his time between the trading desk on Wall Street and as a Rockefeller University. He there developed the hypothesis that naturally produced steroid hormones shift risk preferences systematically across the market cycle, exaggerating the peaks and troughs. Returning to Cambridge, he joined the Department of Physiology, Development and Neuroscience and set about testing this hypothesis in a series of studies set on a trading floor in the City. The results were published in the Proceedings of the National Academy of Sciences.

09.45

5 Minute Transfer Break

09.50

Quantitative Problem Solving Working Groups

Get Your Questions Answered By The Experts! Make The Most Of Your Time At The Conference & Pose Your Related Questions To The Expert Panel & The Gathering Of Relevant Practitioners. Send Problems Over In Advance Or Ask Them On The Day

09.50 - 10.20

Innovations In Equity Derivatives

Nicolas Grandchamp des Raux, Managing Director, Global Head of Quantitative Research, Equity Derivatives, **HSBC**
Jean-Jacques Rabeyrin, Head Of Equity Derivatives Quants **BNP PARIBAS**

09.50 - 10.20

Innovations In Fixed Income Derivatives

Piotr Karasinski, Senior Advisor, **EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT**
Fabio Mercurio, Senior Product Manager, **BLOOMBERG**

09.50 - 10.20

Innovations In Credit Derivatives

Ziggy Jonsson, Partner, **ARAM GLOBAL**
Massimo Morini, Head Of Credit Models & Coordinator Of Model Research, **BANCA IMI**

10.20

Morning Coffee & Networking Break

Stream A:

New Techniques For Pricing & Hedging Equity Derivatives

10.50

Stochastic Dividend Modelling For Derivatives Pricing

- Basics of modelling dividends
- Historic view on implied dividends
- A reference model: stochastic proportional dividends
- Advanced topics

Hans Buehler, Head Of EMEA Equities Quantitative Research **JP MORGAN**

Since 2008 Hans has been Head of EMEA Equities OR at JP Morgan in London. Before this he was Head of Asia Equities OR for JP Morgan in Hong Kong. From 2001 to 2006 he was Head of Global Equity Derivatives OR for Deutsche Bank in London. He holds a PhD in Financial Mathematics from TU Berlin and was co-author of "Equity Hybrid Derivatives" in 2006.

11.30

Panel Discussion

TRADING EXOTIC EQUITY DERIVATIVES

How Has The Market For Exotic Equity Derivatives Changed & Where Are The New Opportunities?

Mike de Vegvar, Managing Director, Equity Derivatives Trading **UBS**

Mike de Vegvar is a Managing Director at UBS responsible for trading exotic equity derivatives and structured products in London. Prior to joining UBS in 1997, Mike traded interest rate derivatives at Bankers Trust and First Chicago. He holds BS and MS degrees in Electrical Engineering from MIT and an MBA from the Wharton School of Business.

Arie Boleslawski, MD & Head Of Structured Equity, Trading, Europe, **SOCIÉTÉ GÉNÉRALE**

Arie is a Managing Director at Societe Generale Corporate and Investment Banking and runs the Structured Equity Trading in Europe. Graduated from Ecole Polytechnique, he has 12 years experience in the derivatives industry. Previously, he was Head of Exotic Credit at Deutsche Bank, London and was before Global Head of Structured Credit Trading at SCIB, New York having started his career on the Equity Index Arbitrage desk. In his current position, Arie is responsible of Cross Asset Solutions Trading platform on Equity derivatives, Hybrids, Mutual Funds and Alternative Investment.

12.10

Optimal No-Arbitrage Bounds Under Calibration: A Stochastic Control Approach

- Link with optimal transport
- Optimal Skorokhod embedding problem
- Lookback options
- Options on variance

Pierre Henry-Labordère, Quantitative Analyst, **SOCIÉTÉ GÉNÉRALE**

Dr. Pierre Henry-Labordère works in the Global Markets Quantitative research team at Société Générale as a quantitative analyst. After receiving his Ph.D. at Ecole Normale Supérieure (Paris) in the Theory of Superstrings, he worked in the theoretical physics department at Imperial College (London) before moving to finance in 2004.

12.50

Audience Q&A & Industry Round Up

13.00

Lunch & Networking Break

Stream E:
Exploring The Latest Techniques In Pricing Hedging & Trading Credit Derivatives

14.00

Liquidity Modelling For Credit Default Swaps & Bonds

- Trading liquidity and CDS markets
- CDS and bond liquidity as an additional spread in reduced form models
- CDS liquidity in the context of the CAPM
- CDS liquidity ranking: bid offer, inactivity and dispersion
- Dependence between credit and liquidity

Damiano Brigo, Gilbert Professor Of Mathematical Finance **KING'S COLLEGE LONDON**

Bio on pg. 4

14.40

Interactions As Sources Of Correlations & Risk In Financial Networks

- We expand models of credit contagion to include dependencies created through CDS contracts
- We show that hedging through CDS will not eliminate the tail-risk of very large losses in financial networks
- Higher losses must be expected with significant probabilities, if banks use hedging via CDS to expand their loan books



Reimer Kühn, Reader In Mathematics **KING'S COLLEGE LONDON**

Reimer Kühn obtained a PhD in Theoretical Physics from Kiel University in 1987. He held post-doctoral and lecturer positions at Heidelberg University, and visiting professorships at Leuven, Bordeaux and Göttingen. In 1993 was awarded the prestigious Heisenberg fellowship. He is presently Reader in Mathematics at King's College London. He has worked on a broad range of problems in Statistical Mechanics of complex systems in physics, random matrix theory, biology, and economics, including recently the role of interactions in financial risk. Details about his research, including recent papers and talks are available for download from his web site <http://www.mth.kcl.ac.uk/~kuehn>

15.20

Forecasting & Trading Future Correlations

- Overview of dynamic correlation models
- Market DCC model: specification and empirical properties
- Applications to correlation/dispersion trading



Arthur Bernd, Head Of Macro Volatility Strategies **CAPITAL FUND MANAGEMENT**

Dr. Arthur Bernd is responsible for directional volatility strategies across variety of underlying asset classes at CFM, a quantitative multi-strategy hedge fund in Paris. Previously he was the Head of Quantitative Market Strategies at BlueMountain Capital Management, a credit hedge fund in New York. Earlier, Arthur was a Senior Vice President at Lehman Brothers, and a Vice President at Goldman Sachs Asset Management. Arthur holds a PhD in physics from Stanford University. He is a member of the editorial board of the Journal of Credit Risk, and the coordinator of the advisory committee for arXiv.org/q-fin, a global electronic research repository for quantitative finance.

Artem Voronov, Independent Research Scientist
NEW YORK UNIVERSITY

16.00

Audience Q&A & Industry Round Up

16.10

Afternoon Tea

16.30

Recent Developments In Pricing CDOs With Stochastic Recovery Rates

- Stochastic recovery rates in CDO market
- Forward recovery modelling
- JTD risk in stochastic recovery models
- Market calibration
- Sensitivity analysis

Martin Kretkel, Senior Quantitative Analyst, **UNICREDIT**

Martin Kretkel is senior quantitative analyst at UniCredit. Since 2005 he held various positions as quantitative analyst and built amongst others the credit pricing analytics for front and back office. Prior this role, he was the head of the financial mathematics department at the Fraunhofer ITWM research institute. He holds a diploma and a Ph.D. in financial mathematics.

17.10

Exploring A New Methodology For Pricing CDO Options: Can Accuracy Best Be Served By Modelling A Range Of Prices?

- Practical examples of embedded CDO tranche options
- Derivation of valuation bounds from available market information
- Pricing range (instead of exact price) as an effective way to deal with incomplete market
- Comparison of valuation bounds from different filtrations
- Numerical examples, hedging implications etc



Yadong Li, Head Of Correlation & EM Credit Modelling, **BARCLAYS CAPITAL**

Yadong Li is the head of correlation and EM credit modelling in Barclays Capital. He earned a Ph.D. degree in Physics and a MS degree in Computer Science, both from the University of Wisconsin-Madison. He also has a MFE degree from the University of California-Berkeley. He has been a credit derivative modeller since 2005. His recent research interests include dynamic correlation modelling, stochastic recovery, cash CLO modelling, risk management and regulatory requirements etc.

17.50

Audience Q&A & Industry Round Up

Stream B:

New Practical Methods For Improving Computational Efficiency

10.50

Auto-Differentiation In Practice

- Introduction: what is auto-differentiation?
- An illustrative example
- Application of auto-differentiation to calibration
- Application of auto-differentiation to sensitivities for Monte Carlo simulation



Jürgen Hakala, Executive Director **EPFG FINANCIAL PRODUCTS**

Jürgen works for EPFG Financial Products, the derivatives house of EPFG, where he is involved in modelling and financial engineering for all asset classes. His initial interest was foreign exchange, where he is co-editor of a textbook about FX derivatives. He is a regular speaker at a variety of conferences.

11.30

Making The Calculation Of Risk Through Monte Carlo Methods More Efficient By Using Adjoint Algorithmic Differentiation

- Risk management with Monte Carlo
- A general paradigm for the fast calculation of risk: adjoint algorithmic differentiation (AAD)
- Real time risk management: examples, results and discussion



Luca Capriotti
Director, Quantitative Strategies

CREDIT SUISSE GROUP

Luca works in Quantitative Strategies (QS) in the New York city office. He is currently focusing on modelling in the areas of Credit, Commodities, Risk Management of a Bank's own credit, Counterparty Credit Risk Management. He is also working on developing efficient and general multiasset Monte Carlo engines supporting fast calculation of Greeks. Previous to this role, he was part of the cross-asset modelling R&D group of QS in the London office.

12.10

Advances In GPU Computing For Derivative Pricing Models



Thomas Weber, SCICOMP

Thomas Weber is a founder of Weber & Partners a financial services consultancy, together with C&Nderstein. Dr. Weber and his team provide technical support for SciFinance in continental Europe. Previously, Dr. Weber was a member of the interest rate research team of Professor Bühler that earned several international prizes for their work on the valuation of interest rate options. He has worked at Deutsche Bank AG, where he was responsible for the development of risk methodology and the approval of pricing models.

12.50

Audience Q&A & Industry Round Up

13.00

Lunch & Networking Break

14.00

Effective & Accurate Data Mining & Density Estimation

- Density estimation through normalizing flows in feature space
- Conditional density estimation
- Time series analysis, principal dynamical components
- Estimation of martingales



Esteban Tabak, Professor Of Mathematics **COURANT INSTITUTE, NYU**

I was born in Buenos Aires in 1963, earned an Engineering degree in hydraulics from the University of Buenos Aires and a Ph. D. in mathematics from MIT. Held a post-doctoral position in applied mathematics in Princeton, and have been for the last 17 years at NYU's Courant Institute, where I'm a professor of mathematics. My main areas of interest are data mining and fluid dynamics.

14.40

Efficient & Accurate Portfolio Risk Distributions Using Selective Re-Valuation

- Motivation:
 - Generating portfolio risk distributions using re-valuation
 - Examples: historic simulation, VaR, stress VaR
 - When sensitivity approximations may not work
- Approximations with error corrections
- Implementing a robust operative process
 - Example: VaR

Christian Fries, Head Of Model Development, Group Risk Control, **DZ BANK**

Bio on pg. 5

15.20

Counterparty Credit Risk For Portfolios Of Netting Sets

- Coherent global market simulations
- Loss distributions and 3d risk visualization
- Credit correlation risk
- Achieving real time performance with single node technology



Claudio Albanese, Professor **KINGS COLLEGE LONDON**

Claudio Albanese holds a PhD from ETH Zurich and pursued an academic career up to achieving the title of professor. He held regular faculty positions at the University of Toronto and Imperial College and currently lectures at King's College London. Claudio's primary occupation is to consult for financial firms about valuation methodologies, risk management and high performance computing.

16.00

Audience Q&A & Industry Round Up

16.10

Afternoon Tea

16.30

Efficient Numerical PDE Methods To Solve Calibration & Pricing Problems In Local Stochastic Volatility Models

- Parametric and non-parametric local volatility specification, calibration methods
- Treatment of jumps in the model dynamics
- Parameter estimation of stochastic volatility process and jumps
- Application to pricing volatility options and implications



Artur Sepp, Vice President, Equity Derivatives **ANALYTICS, BANK OF AMERICA MERRILL LYNCH**

Artur Sepp is a Vice President in the equity derivatives analytics at Bank of America Merrill Lynch in London, where he is developing quantitative models for equity volatility and structured products. Prior to joining the equity group in 2005, he worked with the credit derivatives group at Merrill Lynch in New York focusing on quantitative models for multi- and single-name credit derivatives and hybrid products. Between 2006 and 2007, he worked in the equity derivatives group at Bear Stearns in New York. He holds a PhD in Probability and Mathematical Statistics from University of Tartu (Estonia).

17.10

Examining The Latest Techniques For Hardware Acceleration

- Solid state disks
- Infiniband
- GPUs
- FPGAs

Peter van Kleef, Partner
LAKEVIEW CAPITAL MARKET SERVICES

Bio on pg. 6

17.50

Audience Q&A & Industry Round Up

Stream C:

The Latest Advances In FX & Interest Rate Derivatives Pricing, Hedging & Trading

10.50

What Drives Volatility Of Rates? Empirical Explorations In Developed & Emerging Markets

- The basic facts and definitions
- Description of historical data
- Historical basis point volatility and its regimes through last several decades
- Historical volatility in crisis periods
- Exploring implied volatility with the particular emphasis on the data since 2007
- Conclusions

**Piotr Karasinski, Senior Advisor, EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Piotr's career spans more than 25 years and covers all areas of quantitative finance. Educated in physics at Warsaw and Yale universities, he landed on Wall Street by sheer accident. He has worked for a number of leading firms in New York and London and currently is a Senior Advisor at the European Bank for Reconstruction and Development in London.

11.30

Pricing & Modelling CMS Spread Options

- CMS spreads
- CMS spread smiles
- Dependence modelling
- Copula based modelling
- SABR and multi SABR

**Joerg Kienitz, Head Of Quantitative Analysis DEUTSCHE POSTBANK AG**

Joerg Kienitz is the Head of Quantitative Analysis at Deutsche Postbank AG. He is primarily involved in the development and implementation of models for pricing structured products, derivatives and asset allocation. He authored a number of quantitative finance papers and his book on Monte Carlo frameworks has been published in 2009 with Wiley. He is member of the editorial board of International Review of Applied Financial Issues and Economics. Joerg holds a Ph.D. in stochastic analysis and probability theory.

12.10

Innovations In multi-FX Models**Peter Austing, Quantitative Analytics BARCLAYS CAPITAL**

Peter moved from mathematical physics to finance in 2004. He has been in his current role in the quantitative analytics team at Barclays Capital for four years, and is particularly interested in correlation and volatility modelling for foreign exchange derivatives.

12.50

Audience Q&A & Industry Round Up

13.00

Lunch & Networking Break

14.00

Non-Parametric Stochastic/Local Volatility Modelling

- Fast forward PDE calibration of non-parametric Stochastic/Local Volatility Model
- Match an arbitrary full volatility surface: control of moment explosion
- Practical discussion of calibration issues in the real world
- Estimating a mixed calibration from vanillas and vanilla dynamics
- Enhancing the calibration with pricing data from exotics
- Issues surrounding computation of Greeks
- Implementation within the BLOOMBERG PROFESSIONAL@ service

Grigore Tataru, Quantitative Finance Development BLOOMBERG

Grigore Tataru is a member of the Bloomberg Quantitative Development group for FX, Credit, and Commodity Derivatives. Before joining Bloomberg he worked at Bear Stearns and J.P. Morgan. He holds a Ph.D. in Mathematics from the Massachusetts Institute of Technology.

14.40

Successfully Implementing Stochastic Intrinsic Currency Volatility Models

- Using maximum entropy to parameterise the correlation matrix
- Techniques for obtaining stable solutions
- Extension to multiple less liquid currencies
- Using intrinsic currency volatility to trade FX correlation and covariance swaps

Paul Doust, Head Of Client Quantitative Analysis ROYAL BANK OF SCOTLAND

Paul Doust has been working in the financial markets since 1987 in a variety of trading, structuring and quantitative roles. As a complex derivative trader in the early 1990's, he did some of the early work on convexity adjustments, before moving into structured credit in the late 1990's. He is now co-head of the Quantitative Client Research team at the Royal Bank of Scotland, where the focus is the application of quantitative techniques to help clients generate alpha.

15.20

Double No-Touches: Market Consistent Pricing With LSV Models

- First generation exotics: continuous barriers
- Sensitivity to skew and smile
- Candidate models: LV, SV, LSV
- Tuning between local and stochastic volatility

**Iain Clark, Head Of FX & Commodities Quantitative Analysis STANDARD BANK**

Iain Clark is Head of FX & Commodities Quantitative Analysis at Standard Bank, London. He holds a Ph.D. in applied mathematics and has been a front office quant for 12 years, having previously worked at JP Morgan, BNP Paribas, Lehman Brothers and Dresdner Kleinwort. He is the author of Foreign Exchange Option Pricing: A Practitioner's Guide, Wiley Finance, 2010.

16.00

Audience Q&A & Industry Round Up

16.10

Afternoon Tea

16.30

Cash-Settled Swaptions: A Multi-Model Analysis

- Cash-settled swaption: liquid product in EUR/GBP
- The market formula
- Arbitrage with physical settled swaptions
- Price variation over models

Marc Henard, Head Of Interest Rate Modelling, DEXIA

Marc Henard covers interest rate and inflation model development and implementation for the front-office. His main areas of expertise are term structure modelling, derivatives pricing and hedging and risk management. He publishes on those subjects in international journals on a regular basis. He previously held the position of Head of Quantitative Research and Deputy Head of Treasury Risk at the BIS. He worked as a lecturer and research scientist at Louvain University, SISSA and Scuola Normale di Pisa.

17.10

A Class Of Lévy Interest Rate Models Based On The Zeta Process**Lane Hughton, Chair In Mathematical Finance, IMPERIAL COLLEGE LONDON**

Professor Lane P. Hughton, MA, D. Phil, is Chair in Mathematical Finance at Imperial College London. His doctorate in mathematics was awarded by the University of Oxford, where he was a Rhodes Scholar. Prior to joining Imperial College, Professor Hughton held the Chair in Financial Mathematics in the Department of Mathematics at King's College London. Before joining King's he was Director of Derivative Product Risk Management at Merrill Lynch, London, where he was responsible for managing the development of pricing and hedging models for interest rate and foreign exchange derivatives. His research interests include a wide range of topics in mathematical finance and its applications to financial economics, including: the pricing and risk management of derivative securities; models for interest rates and foreign exchange; commodity, credit, equity, energy, and inflation derivatives; the impact of transaction costs on derivative prices; stochastic volatility; macroeconomic models; and information-based asset pricing. Professor Hughton belongs to the London Mathematical Society, the Bachelor Finance Society, the American Finance Association, and the American Physical Society. He is a Fellow of the Institute of Mathematics and its Applications, and a lifetime member of the American Mathematical Society and the International Society for General Relativity and Gravitation. He has held visiting appointments at the University of Texas at Austin, at King's College London, and at the Perimeter Institute, Ontario. Professor Hughton is Editor-in-Chief of International Journal of Theoretical and Applied Finance, and acts as an associate editor for Mathematical Finance, Quantitative Finance, Applied Mathematical Finance, Proceedings of the Royal Society A, and the IMA Journal of Applied Mathematics.

17.50

Audience Q&A & Industry Round Up

Stream D:

Enhanced Volatility Modelling & Trading

10.50

EXTENDED SESSION**Exploiting Discrepancies between Historical and Implied Values**

- Playing historical against implied moments
- Trading the strategy or structuring a product
- Hedge efficacy: a review of popular structures
- Ill conceived volatility, correlation and skew trades
- Common fallacies: leverage, jumps, calibration, hedgeability

Bruno Dupire, Head Of Quantitative Research, BLOOMBERG

Bio on pg. 4

12.10

Three Sources & Three Component Parts of the Universal Volatility Model

- The universal volatility model (UVM) and its applications to pricing of financial derivatives
- Three sources of UVM: the local volatility model, the stochastic volatility model and the jump-diffusion model
- Three component parts of UVM: pricing of vanilla and first-generation exotic options, calibration of the model to the market and pricing of second-generation exotics
- The main analytical, semi-analytical, and numerical techniques needed for efficient implementation of UVM from a practical standpoint with a particular emphasis on the Lewis-Lipton formula and its applications

**Alex Lipton, Co-Head Of Global Quantitative Group BANK OF AMERICA MERRILL LYNCH & Visiting Professor, IMPERIAL COLLEGE**

Prior to his current roles, Alex was Global Head of Credit Analytics at Merrill Lynch. Earlier, he was a Managing Director and Head of Capital Structure Quantitative Research at Citadel Investment Group in Chicago; he had also worked at Credit Suisse, Deutsche Bank and Bankers Trust. Previously, Alex was a Full Professor of Mathematics at the University of Illinois at Chicago and a Consultant at Los Alamos National Laboratory. His current interests include industrial-strength pricing of derivatives, as well as technical trading strategies. In 2000 Alex was awarded the first Quants of the Year Award by Risk Magazine. Alex is the author of two books ("Magneto-hydrodynamics and Spectral Theory" and "Mathematical Methods for Foreign Exchange") and the co-editor of four more including "The Oxford Handbook of Credit Derivatives", OUP (2011).

12.50

Audience Q&A & Industry Round Up

13.00

Lunch & Networking Break

14.00

Variance Swaps On Multivariate Time-Change Processes**Andy Itkin, Director Of Financial Engineering HAP CAPITAL**

Dr. Andy Itkin is Director of Financial Engineering at HAP Capital. He is also an adjunct professor at NYU Poly and Rutgers University. He received his Ph.D. in computational physics and degree of Dr. of Science in molecular physics, and published a book and numerous papers in physics before he moved to finance. Prior to his current job Andy occupied senior quantitative managerial positions at CTC, Volant Trading, Amaranth, Bloomberg and Thomson Financial.

14.40

Asymptotics For Basket Options

- Review several methods for pricing spread options
- Review Avellaneda-Busca-Fritz method to price basket options
- Discuss new approach combining heat kernel method with Dupire-like formulas to determine asymptotic expansions for prices and implied volatility of basket
- Relate implied volatility of basket to that of its components

Peter Laurence, Professor Of Mathematics UNIVERSITY OF ROMÉ

Peter Laurence is a Professor of Mathematics at the University of Rome, "La Sapienza" and a visiting scholar at the Courant Institute. He completed his PhD in 1981 in applied mathematics at the University of Wisconsin. He has published widely in leading international journals in a wide spectrum of areas in applied mathematics and of partial differential equations. In 1997 he became interested in mathematical finance and in 1999 co-authored with Marco Avellaneda a book on option pricing. He has taught mathematical finance at the graduate level at NYU's Courant Institute, Columbia University and at Universities of Rome I and II. In 2001-2002 he was a Director in Standard and Poor's Risk Solutions group where he specialised in Portfolio Credit Risk.

15.20

Hedging Risks In Complex Markets

- Proliferation of derivatives and market stability
- Stabilizing risk measures for large portfolios
- Portfolio optimization in illiquid markets

**Matteo Marsili, Research Scientist THE ABDUS SALAM ICTP**

Matteo Marsili is currently a research scientist at the Abdus Salam ICTP, Trieste. He received his Ph.D. in Physics at SISSA. He has authored more than 100 scientific publications and two books. He has made important contributions to non-equilibrium statistical physics and to interdisciplinary applications of statistical mechanics to complex systems, and to economics and finance in particular. Coordinator of the programme on Environmental and Ecological Economics (EE) at ICTP and of several research groups. Scientific Director of Journal of Statistical Mechanics and editor of Journal of Economic Interaction and Coordination, European Journal of Physics B and Physical Review E.

15.50

Audience Q&A & Industry Round Up

16.00

Afternoon Tea

Stream F:

Latest Innovations In Portfolio Optimisation

16.30

Optimization for Optimisation

- Incorporating options into mean-variance frontiers
- Specifying investor views
- Handling nonlinearities, skewness and kurtosis
- Backtesting results

Mark Broadie, Carlson Family Professor Of Business GRADUATE SCHOOL OF BUSINESS, COLUMBIA UNIVERSITY

Bio on pg. 4

17.10

Strategies For Managing Diversification

- Consistency of definitions of diversification
- Principal components and the fine structure of diversification
- Entropy and the effective number of bets in arbitrary portfolios
- Heuristics for diversification optimization

Attilio Meucci, Chief Risk Officer, KEPOS CAPITAL

Bio on pg. 4

17.50

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<input type="checkbox"/> 1 Day Package: Summit only	11 April	£1,499 +VAT@19.6% = £1,792.80		£1,499 +VAT@19.6% = £1,792.80		£1,499 +VAT@19.6% = £1,792.80	

Please note discounts can only be claimed at the time of registration and is off the rate at that time. Discounts cannot be combined. The VAT rate is subject to change and may differ from the advertised rate. The amount you are charged will be determined when your invoice is raised. Please note the conference fee does not include travel or hotel accommodation costs. * All discounts are subject to approval. Savings include Multiple Booking & Early Booking Discounts. All discounts can only be applied at the time of registration and discounts cannot be combined. All discounts are subject to approval. Please note the conference fee does not include travel or hotel accommodation costs. **£200 discount for 3rd and subsequent delegates.**

PAYMENT DETAILS

Please use this form as our request for payment. Fax and phone bookings should be made with a credit card number, or followed up by a posted registration form. Places are only guaranteed by full payment, which must be received before the conference.

I will pay by:

- ☐ Cheque/bankers draft made payable to ICBI for £.....
☐ Invoice to be sent to my company
☐ Bank transfer - full details of bank transfer options will be given with your invoice on registration.

Please note the VAT rate is subject to change and may differ from the advertised rate. The amount you are charged will be determined when your invoice is raised.

Please debit my Mastercard ☐ Visa ☐ Eurocard ☐ American Express ☐

Card Number

Expiry Date / with the sum of £

Signature _____

CVV Number

3 digit security code on the reverse of card, 4 digits for AMEX card

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