Journées de la finance mathématique 2010
Mathematical Finance Days 2010

13 et 14 mai 2010
May 13-14, 2010

Programme et résumés
Program and abstracts

Bonjour!

Bienvenue aux journées de la finance mathématique 2010.

Il y a déjà 12 ans que l'IFM2 a été créé par le gouvernement du Québec dans le but de supporter la recherche et la formation de personnel hautement qualifié en finance mathématique. C'est avec grand plaisir que l'Institut organise cette année ce premier colloque, dans le but de resserrer les liens et les occasions de collaboration dans la communauté académique et professionnelle.

Nous espérons que vous trouverez votre participation des plus enrichissantes et que ce colloque deviendra un événement annuel à ne pas manquer.

Nous vous convions également jeudi à 17h30 à un cocktail qui nous permettra d'échanger entre participants dans une atmosphère détendue.

Welcome to the Mathematical Finance Days 2010.

It now has been 12 years since the IFM2 was created by the government of Québec, in order to support research and formation of highly qualified personnel in mathematical finance. It is with great pleasure that the Institute organizes this first workshop this year, in order to increase networking and collaboration in our academic and professional community. .

We wish all participants a very fruitful conference, and we hope that this worshop will become an major annual event.

We also invite you on Thursday at 5:30 pm to a cocktail to meet the other participants and enjoy a pleasant moment together.

Les membres du comité organisateur
The members of the organizing committee

Emplacement des activités / *Activity locations*

HEC Montréal
3000, ch. de la Côte-Ste-Catherine
Montréal (Qc) Canada, H3T 2A7

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http://www.finmat10.uqam.ca/index.htm

◊ Pauses café : Société générale de financement du Québec (rez-de-jardin)
◊ Séances plénières : Amphithéâtre IBM (rez-de-jardin)
◊ Autres séances : 1er étage
◊ Déjeuners: Atrium (rez-de-jardin)
◊ Cocktail : salon Deloitte (4ième étage)

◊ *Coffee break: Société générale de financement du Québec (Garden Level)*
◊ *Plenary Sessions: Amphithéâtre IBM (Garden Level)*
◊ *Other Sessions: 1st floor*
◊ *Lunches: Atrium (Garden Level)*
◊ *Cocktail: Salon Deloitte (4th floor)*

Comite organisateur / *Organizing Committee*

Michèle Breton
HEC Montréal

Peter Christoffersen
McGill University

Jean-Claude Cosset
HEC Montréal

Georges Dionne
HEC Montréal

Denise Morin
IFM2

Luc St-Arnault
IFM2

Le programme en bref / *Program at a glance*

Thursday, May 13 / *Jeudi 13 mai*

8:00-8:45	Registration / *Inscription*
8:45-9:00	Opening Session / *Séance d'ouverture* **Luc St-Arnault**, directeur de l'IFM2
9:00-10:15	Plenary lecture T1 / *exposé plénierT1* **Nizar Touzi**, École Polytechnique Amphithéatre IBM
10:15-10:30	Break / *pause*
10:30-12:10	Parallel sessions T2 / *Séances parallèles T2* **SDEs and dynamic models,** Serge Saucier **Diplômés de M.Sc.**, Marie Husny **Alternative investments**, Nancy et Michel Gaucher
12:10-13:30	Lunch / *Déjeuner* Atrium
13:30-15:10	Parallel sessions T3 / *Séances parallèles T3* **Financial risk management,** Serge Saucier **Forecasting return distributions**, Marie Husny **Financial markets**, Nancy et Michel Gaucher
15:10-15:30	Break / *pause*
15:30-17:00	Parallel sessions T4 / *Séances parallèles T4* **Credit risk**, Serge Saucier **Asset pricing**, Marie Husny **International finance**, Nancy et Michel Gaucher
17:30-19:00	Cocktail and best paper award / Réception et prix du meilleur article **Daniel Leclair**, président du conseil d'administration de l'IFM2 Salon Deloitte

Friday, May 14 / *Vendredi 14 mai*

9:00-10:15	Plenary lecture F1 / *exposé plénierF1* **Pierre l'Écuyer**, Université de Montréal Amphithéatre IBM
10:15-10:30	Break / *pause*
10:30-12:10	Parallel sessions F2 / *Séances parallèles F2* **Fundamental factors & stock returns**, Serge Saucier **Financial econometrics**, Marie Husny **Risk management in practice**, Nancy et Michel Gaucher
12:10-13:30	Lunch / *Déjeuner* Atrium
13:30-15:10	Parallel sessions F3 / *Séances parallèles F3* **Financial engineering**, Serge Saucier **Funds performance**, Marie Husny **Corporate finance**, Nancy et Michel Gaucher
15:10-15:30	Break / *pause*
15:30-17:00	Parallel sessions F4 / *Séances parallèles F4* **Numerical methods**, Serge Saucier **Hedging**, Marie Husny **Incentives**, Nancy et Michel Gaucher

La langue dans laquelle apparaît le titre sera celle utilisée lors de la présentation.
Talks will be given in the language in which the title appears.

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Thursday, May 13 / Jeudi 13 mai

T1	**Plenary lecture / exposé plénier**
	Amphithéatre IBM **Chairperson / présidente: Michèle Breton**
9:00	MONTE CARLO METHODS FOR NONLINEAR PDES **Nizar Touzi**, École Polytechnique (touzi@cmap.polytechnique.fr)
T2A	**Stochastic differential equations and dynamic models** **Room / Salle: Serge Saucier** **Chairperson / président: Cody Hyndman**
10:30	FORWARD-BACKWARD SDES AND TRANSFORMS FOR AFFINE JUMP DIFFUSIONS **Cody Hyndman**, Concordia University (hyndman@mathstat.concordia.ca)
10:55	MEAN-VARIANCE OPTIMAL PORTFOLIO WITH EXTENDED CIR INTEREST RATES **François Watier**, UQAM (watier.francois@uqam.ca) René Ferland, UQAM (ferland.rene@uqam.ca)
11:20	INDUSTRY EQUILIBRIUM IN CONTINUOUS TIME **Tony Berrada**, Université de Genève (tony.berrada@unige.ch) Julien Hugonnier, École Polytechnique de Lauzanne (Julien.Hugonnier@epfl.ch)
11:45	LARGE PORTFOLIO RISK MANAGEMENT WITH DYNAMIC COPULAS **Xisong Jin**, McGill University (xisong.jin@mail.mcgill.ca)
T2B	**Travaux des diplômés des programmes de maîtrise en ingénierie financière – Évaluation des actifs contingents : théories et pratiques** **Room / Salle: Marie Husny** **Chairperson / président: Van Son Lai**
10:30	ÉVALUATION DES OPTIONS DANS LES PRODUITS STRUCTURÉS DE DÉTAIL **Marc L. Michaud**, Fédération des caisses Desjardins du Québec (marc.l.michaud@desjardins.com)
10:55	TARIFICATION D'OPTIONS SOUS GARCH PAR DES MÉTHODES SPECTRALES D'APPROXIMATION EN PROGRAMMATION DYNAMIQUE Michèle Breton, HEC Montréal (michele.breton@hec.ca) Javier de Frutos, Universidad de Valladolid (frutos@mac.uva.es) **Saad Serghini Idrissi**, HEC Montréal (saad.serghini-idrissi@hec.ca)
11:20	LE CAPITAL ÉCONOMIQUE CHEZ LES ASSUREURS OBLIGATAIRES **Luc Grégoire**, Banque Nationale du Canada (luc.gregoire@tres.bnc.ca) Van Son Lai, Université Laval (VanSon.Lai@fsa.ulaval.ca) Issouf Soumaré, Université Laval (Issouf.Soumare@fsa.ulaval.ca)
11:45	APPLICATION DU CALCUL DE MALLIAVIN EN OPTIMISATION DE PORTEFEUILLE Chantal Labbé, HEC Montréal (chantal.labbe@hec.ca) **Clarence Simard**, Université de Montréal (clarence.simard@hec.ca)

T2C	**Alternative investment: Analysis and applications / Placements alternatifs: analyse et applications** **Room / Salle: Nancy et Michel Gaucher** **Chairperson / président: Komlan Sedzro**
10:30	ON THE VALUE OF LIQUIDITY Martin Gagnon, Innocap Investment Management (martin.gagnon@innocap.com) **Pierre Laroche**, Innocap Investment Management (Pierre.Laroche@innocap.com) Bruno Rémillard, HEC Montreal (bruno.remillard@hec.ca)
10:55	UTILISATION DE FONDS DE COUVERTURE DANS UN PORTEFEUILLE DE CAISSE DE RETRAITE **Pierre Bouvier**, Université de Sherbrooke (Pierre.Bouvier@USherbrooke.ca)
11:20	MANAGERIAL INCENTIVES AND THE RISK-TAKING BEHAVIOR OF HEDGE FUND MANAGERS **Serge Patrick Amvella Motaze**, HEC Montréal (serge.amvella@hec.ca)
11:45	CAN WE REALLY "CLONE" HEDGE FUND RETURNS? FURTHER EVIDENCE Maher Kooli, UQAM (Kooli.maher@uqam.ca) **Sameer Sharma**, UQAM (sharma.sameer_kumar@courrier.uqam.ca)
T3A	**Financial Risk Management** **Room / Salle: Serge Saucier** **Chairperson / président: Peter Christoffersen**
13:30	THE UNCONDITIONAL AND CONDITIONAL EXCHANGE RATE EXPOSURE OF U.S. FIRMS **Stefano Mazzotta**, Kennesaw State University (stefano_mazzotta@kennesaw.edu) Ines Chaieb, University of Amsterdam (i.chaieb@uva.nl)
13:55	ARE ANALYST RECOMMENDATIONS INFORMATIVE? EVIDENCE FROM INTRADAY JUMPS Daniel Bradley, University of South Florida (danbradley@usf.edu) Jonathan Clarke, Georgia Tech (jonathan.clarke@mgt.gatech.edu) Suzanne Lee, Georgia Tech (suzanne.lee@mgt.gatech.edu) **Chayawat Ornthanalai**, Georgia Tech (chay.ornthanalai@mgt.gatech.edu)
14:20	DEBT, EQUITY AND ASSET VALUES WITH CHAPTER 11, CHAPTER 7 AND BUSINESS CYCLES: A STRUCTURAL EQUILIBRIUM APPROACH **Redouane Elkamhi**, University of Iowa (redouane-elkamhi@uiowa.edu) Min Jiang, University of Iowa (mjiang97@gmail.com)
14:45	BUSINESS CONDITIONS, MARKET VOLATILITY AND OPTION PRICES **Christian Dorion**, McGill University (christian.dorion@mail.mcgill.ca)

T3B	**Forecasting return distributions** **Room / Salle: Marie Husny** **Chairperson / président: Jeroen Rombouts**
13:30	THE METHOD OF SIMULATED QUANTILES Yves Dominicy, Université libre de Bruxelles (ydominic@ulb.ac.be) **David Veredas**, Université Libre de Bruxelles (dveredas@ulb.ac.be)
13:55	HOW TO CHOOSE A MULTIVARIATE GARCH MODEL? A MODEL CONFIDENCE SET APPROACH Sebastien Laurent, Maastricht University (sebastien.laurent@fundp.ac.be) **Jeroen V.K. Rombouts**, HEC Montéral (jeroen.rombouts@hec.ca) Francesco Violante, CORE (fviolant@fundp.ac.be)
14:20	SKEWNESS FROM HIGH-FREQUENCY DATA PREDICTS THE CROSS-SECTION OF STOCK RETURNS Diego Amaya, HEC Montréal (diego.amaya@hec.ca) **Aurelio Vasquez**, McGill University (aurelio.vasquez@mcgill.ca)
14:45	SUBSAMPLING HIGH FREQUENCY DATA **Ilze Kalnina**, Université de Montréal (ilze.kalnina@umontreal.ca)
T3C	**Financial Markets** **Room / Salle: Nancy et Michel Gaucher** **Chairperson / président: Lorne Switzer**
13:30	INSTITUTIONAL HERDING AND INFORMATION CASCADES: EVIDENCE FROM DAILY TRADES Suzan Christoffersen, McGill University (susan.christoffersen@mcgill.ca) **Ya Tang**, McGill University (ya.tang@mail.mcgill.ca)
13:55	MARKET EFFICIENCY AND THE RISKS AND RETURNS OF DYNAMIC TRADING STRATEGIES WITH COMMODITY FUTURES **Lorne Switzer**, Concordia University (switz@jmsb.concordia.ca) Hui Jiang, Concordia University (kendraj777@gmail.com)
14:20	ORDER-FLOW VARIABILITY: IMPLICATIONS FOR THE TRADING ENVIRONMENT **Rahul Ravi**, Concordia University (rravi@jmsb.concordia.ca) Aditya Kaul, University of Alberta (akaul@ualberta.ca)
14:45	FURTHER EVIDENCE ON MULTIVARIATE CONDITIONAL ASSET PRICING AND FINANCIAL INTEGRATION IN NORTH AMERICA Marie-Claude Beaulieu, Université Laval (Marie-Claude.Beaulieu@fas.ulaval.ca) **Marie-Hélène Gagnon**, Université Laval (mhgagnon@wharton.upenn.edu) Lynda Khalaf, Carleton University (Lynda_Khalaf@carleton.ca)

T4A	**Credit Risk** **Room / Salle: Serge Saucier** **Chairperson / président: Oussama Chakroun**
15:30	ON THE DETERMINANTS OF THE IMPLIED DEFAULT BARRIER **Sadok Laajimi**, National Bank of Canada (sadok.laajimi@bnc.ca) Georges Dionne, HEC Montréal (georges.dionne@hec.ca)
15:55	MIGRATION DEPENDENCE AMONG THE U.S. BUSINESS SECTORS **Oussama Chakroun**, Invest Québec (oussama.chakroun@invest-quebec.com)
16:20	CDS TREES **Ridha Mahfoudhi**, Laval University (ridha.mahfoudhi@fsa.ulaval.ca)
16:45	THE EFFECT OF MONETARY POLICY ON CREDIT SPREADS **Tolga Cenesizoglu**, HEC Montréal (tolga.cenesizoglu@hec.ca) Badye Essid, HEC Montréal (badye-omar.essid@hec.ca)
T4B	**Asset Pricing** **Room / Salle: Marie Husny** **Chairperson / présidente: Denitsa Stefanova**
15:30	MODÈLES LINÉARISÉS DE NELSON-SIEGEL (1987) ET SVENSSON (1994) POUR L'ESTIMATION DE STRUCTURES À TERMES DE TAUX Geneviève Gauthier, HEC Montréal (genevieve.gauthier@hec.ca) **Jean-Guy Simonato**, HEC Montréal (jean-guy.simonato@hec.ca)
15:55	PORTFOLIO SELECTION WITH TRANSACTION COSTS AND JUMP-DIFFUSION ASSET DYNAMICS: A NUMERICAL APPROACH **Michal Czerwonko**, Concordia University (michalc04@gmail.com) Stylianos Perrakis, Concordia University (sperrakis@jmsb.concordia.ca)
16:20	DYNAMIC CORRELATION OR TAIL DEPENDENCE HEDGING FOR PORTFOLIO SELECTION Redouane Elkamhi, University of Iowa (redouane-elkamhi@uiowa.edu) **Denitsa Stefanova**, Vrije Universitet (dstefanova@feweb.vu.nl)
16:45	FEAR OF DEFAULT AND VOLATILITY IN A DYNAMIC FINANCIAL-MARKET EQUILIBRIUM **Emilio Osambela**, Tepper School of Business, Carnegie Mellon University (osambela@cmu.edu)

T4C	**International Finance** **Room / Salle: Nancy et Michel Gaucher** **Chairperson / président: Vihang Errunza**
15:30	INTERNATIONAL CROSS-LISTINGS AND SUBSEQUENT SECURITY-MARKET CHOICES: EVIDENCE FROM ADRS Narjess Boubakri, American University of Sharjah (nboubakri@aus.edu) **Jean-Claude Cosset**, HEC Montréal (jean-claude.cosset@hec.ca) Anis Samet, Abu Dhabi University (anis.samet@adu.ac.aeg)
16:00	DO IMPLICIT BARRIERS MATTER FOR GLOBALIZATION? **Francesca Carrieri**, McGill University (Francesca.carrieri@mcgill.ca) Ines Chaieb, University of Amsterdam (i.chaieb@uva.nl) Vihang Errunza, McGill University (Vihang.errunza@mcgill.ca)
16:30	ON THE HANSEN-JAGANNATHAN DISTANCE WITH A NO-ARBITRAGE CONSTRAINT **Nikolay Gospodinov**, Concordia University (nikolay.gospodinov@concordia.ca) Raymond Kan, University of Toronto (kan@chass.utoronto.ca) Cesare Robotti, Federal Reserve Bank of Atlanta (cesare.robotti@atl.frb.org)

Friday, May 14 / Vendredi 14 mai

F1	**Plenary lecture / exposé plénier**
	Amphithéatre IBM **Chairperson / présidente: Geneviève Gauthier**
9:00	ON THE EFFECTIVENESS OF RANDOMIZED QUASI-MONTE CARLO IN FINANCE **Pierre L'Écuyer**, Université de Montréal (lecuyer@iro.umontreal.ca)
F2A	**Fundamental Factors and Stock Returns** **Room / Salle: Serge Saucier** **Chairperson / président: Mohammed Bouaddi**
10:30	EMPIRICAL EVIDENCE OF THE EFFECTS OF NEWS IN THE PRICING OF EXHAUSTIBLE NATURAL RESOURCES **Justin Johnson Kakeu Kengne**, Université de Montréal (justin.johnson.kakeu.kengne@umontreal.ca) Mohammed Bouaddi, HEC Montréal (mohammed.bouaddi@hec.ca)
10:55	A MODEL OF FACTORS-REFERENCE PREFERENCES Mohammed Bouaddi, HEC Montréal (Mohammed.bouaddi@hec.ca) **Mohamed Douch**, Royal Military College of Canada (Mohamed.Douch@rmc.ca)
11:20	DIFFUSION INDEX APPROACH TO THE PARAMETRIC PORTFOLIO OPTIMIZATION **Mohammed Bouaddi**, HEC Montréal (mohammed.bouaddi@hec.ca) Abderrahim Taamouti, Universidad Carlos III de Madrid (ataamout@eco.uc3m.es)
11:45	ACCRUALS QUALITY, STOCK RETURNS, AND MACROECONOMIC CONDITIONS Dongcheol Kim, Korea University Business School (kimdc@korea.ac.kr) **Yaxuan Qi**, Concordia University (yxqi@jmsb.concordia.ca)
F2B	**Financial Econometrics: Realized volatility, integrated volatility and Background risk / Économétrie financière: volatilité réalisée, volatilité intégrée et risque exogène** **Room / Salle: Marie Husny** **Chairperson / présidente: Pascale Valéry**
10:30	SEPARATING THE INTEGRATED VOLATILITY INTO ITS LATENT FACTORS **Rachidi Kotchoni**, Université de Montréal (rachidi.kotchoni@umontreal.ca)
10:55	SEGREGATING CONTINUOUS VOLATILITY FROM JUMPS IN LONG-RUN RISK-RETURN TRADE-OFFS **Cedric Okou**, HEC Montréal (cedric.okou@hec.ca) Éric Jacquier, HEC Montréal (Eric.jacquier@hec.ca)
11:20	ASSET PRICING IN THE PRESENCE OF BACKGROUND RISK **Andrei Semenov**, York University (asemenov@econ.yorku.ca)
11:45	THE INFORMATION CONTENT ON REALIZED VOLATILITY Éric Jacquier, HEC Montréal (eric.jacquier@hec.ca) **Shirley Miller**, Université de Montréal (shirley.miller.lira@umontreal.ca)

F2C	**Risk Management in Practice** **Room / Salle: Nancy et Michel Gaucher** **Chairperson / présidente: Hela Dahen**
10:30	RISK CASCADES: EXPLORING RISK PROPAGATION AND SENSITIVITY **Martin Pergler**, McKinsey and Company (Martin_Pergler@mckinsey.com)
10:55	DOOMSDAY FOR RISK MODELS OR THE CHANCE FOR A NEW PARADIGM? **Erik Lüders**, McKinsey and Company (Erik_Lueders@mckinsey.com)
11:20	WHAT ABOUT UNDEREVALUATING OPERATIONAL VALUE AT RISK IN THE BANKING SECTOR? Georges Dionne, HEC Montréal (georges.dionne@hec.ca) **Hela Dahen**, Banque Nationale (hela.dahen@bnc.ca)
11:45	RISK-MANAGEMENT LESSONS FROM BONUS SCHEMES **Dietmar Leisen**, University of Mainz (leisen@uni-mainz.de)
F3A	**Ingénierie financière / Financial Engineering** **Room / Salle: Serge Saucier** **Chairperson / présidente: Geneviève Gauthier**
13:30	ESTIMATION OF STRUCTURAL MODELS VIA FILTERING TECHNIQUES **Diego Amaya**, HEC Montréal (diego.amaya@hec.ca) Mathieu Boudreault, UQAM (boudreault.mathieu@uqam.ca) Geneviève Gauthier, HEC Montréal (genevieve.gauthier@hec.ca)
13:55	MULTIVARIATE OPTION PRICING WITH TIME VARYING VOLATILITY MODELS Jeroen V.K. Rombouts, HEC Montréal (jeroen.rombouts@hec.ca) **Lars Stentoft**, HEC Montréal (lars.stentoft@hec.ca)
14:20	CREDIT RISK MODEL: ON THE NON-LINEAR RELATIONSHIP BETWEEN DEFAULT INTENSITY AND LEVERAGE **Mathieu Boudreault**, UQAM (boudreault.mathieu@uqam.ca) Geneviève Gauthier, HEC Montréal (genevieve.gauthier@hec.ca)
14:45	MEAN-VARIANCE PORTFOLIO MANAGEMENT IN A MARKET WITH STOCHASTIC CORRELATIONS **François Watier**, UQAM (watier.francois@uqam.ca) René Ferland, UQAM (ferland.rene@uqam.ca)

F3B	**Mutual funds and hedge funds performance** **Room / Salle: Marie Husny** **Chairperson / président: Iwan Meier**
13:30	MUTUAL FUND TOURNAMENTS Iwan Meier, HEC Montréal (iwan.meier@hec.ca) **Aymen Karoui**, HEC Montréal (aymen.karoui@hec.ca)
13:55	MUTUAL FUND'S R2 AS PREDICTOR OF PERFORMANCE Yakov Amihud, New York University **Ruslan Goyenko**, McGill University (ruslan.goyenko@mcgill.ca)
14:20	HEDGE FUND PREDICTABILITY UNDER THE MAGNIFYING GLASS: THE ECONOMIC VALUE OF FORECASTING INDIVIDUAL FUND RETURNS Doron Avramov, University of Maryland (davramov@rhsmith.umd.edu) **Laurent Barras**, McGill University (Laurent.barras@mcgill.ca) Robert Kosowski, Imperial College (r.kosowski@ic.ac.uk)
14:45	DYNAMIC HEDGE FUND STYLE ANALYSIS WITH ERRORS-IN-VARIABLES Laurent Bodson, Université de Liège (Laurent.Bodson@ulg.ac.be) **Alain Coën**, UQAM (coen.alain@uqam.ca) Georges Hübner, Université de Liège (G.Hubner@ulg.ac.be)
F3C	**Corporate finance** **Room / Salle: Nancy et Michel Gaucher** **Chairperson / président: Issouf Soumaré**
13:30	THE RESOURCE CURSE: A CORPORATE TRANSPARENCY CHANNEL **Art Durnev**, McGill University (art.durnev@mcgill.ca) Sergei Guriev, New Economic School, Moscow (sguriev@nes.ru)
13:55	EVIDENCE ON THE JOINT DETERMINATION OF CASH HOLDINGS AND HEDGING **Monica Marin**, HEC Montréal (monica.marin@hec.ca) Greg Niehaus, University of South Carolina (gregn@moore.sc.edu)
14:20	REAL OPTION FINANCING UNDER ASYMMETRIC INFORMATION **Mathieu Bouvard**, McGill University (matthieu.bouvard@mcgill.ca)
14:45	AN ANALYSIS OF GOVERNMENT LOAN GUARANTEES AND DIRECT INVESTMENT THROUGH PUBLIC-PRIVATE PARTNERSHIPS **Issouf Soumaré**, Université Laval (issouf.Soumare@fas.ulaval.ca) Van Son Lai, Université Laval (VanSon.Lai@fsa.ulaval.ca)

F4A	**Numerical methods** **Room / Salle: Serge Saucier** **Chairperson / président: Lars Stentoft**
15:30	AMERICAN OPTION PRICING WITH QUASI-MONTE CARLO SIMULATIONS **Maxime Dion**, Université de Montréal (dion.maxime@gmail.com) Pierre L'Écuyer, Université de Montréal (lecuyer@iro.umontreal.ca)
15:55	STOCHASTIC MESH METHODS FOR QUADRATIC HEDGING WITH TRANSACTION COSTS **Pierre-Alexandre Tremblay**, Université de Montréal (tremblap@iro.umontreal.ca) Pierre l'Écuyer, Université de Montréal (lecuyer@iro.umontreal.ca)
16:20	AMERICAN AND BERMUDAN OPTION PRICING BY FOURIER TRANSFORM **Chedly Baraket**, HEC Montréal (chedly.baraket@hec.ca)
16:45	IMPROVING THE LEAST-SQUARES MONTE CARLO METHOD BY IMPOSING STRUCTURE **Pascal Létourneau**, HEC Montréal (pascal.letourneau@hec.ca) Lars Stentoft, HEC Montréal (lars.stentoft@hec.ca)
F4B	**Hedging / Couverture** **Room / Salle: Marie Husny** **Chairperson / président: Bruno Rémillard**
15:30	BETAS, HEDGE FUNDS AND THE MYTH OF MARKET NEUTRALITY **Nicolas Papageorgiou**, HEC Montréal (nicolas.papageorgiou@hec.ca) Jonathan Reeves, University of New South Wales (reeves@unsw.edu.au) Kevin Xie, University of New South Wales (kevin.xie.811210@gmail.com)
15:55	OPTIMAL HEDGING IN DISCRETE AND CONTINUOUS TIME **Bruno Remillard**, HEC Montréal (bruno.remillard@hec.ca) Sylvain Rubenthaler, Université de Nice-Sophia Antipolis (rubentha@unice.fr)
16:20	OPTION PRICING AND DYNAMIC DISCRETE TIME HEDGING FOR REGIME-SWITCHING MODELS **Alexandre Hocquard**, HEC Montréal (alexandre.hocquard@hec.ca) Bruno Rémillard, HEC Montréal (bruno.remillard@hec.ca) Nicolas Papageorgiou, HEC Montréal (nicolas.papageorgiou@hec.ca)
16:45	COUVERTURE DU RISQUE D'INFLATION À LONG TERME DES FONDS DE PENSION À L'AIDE D'INVESTISSEMENTS ALTERNATIFS **Medhi Rahimi**, Université du Québec à Montréal (mehdi.rahimi@hec.ca) Komlan Sedzro, Université du Québec à Montréal (Sedzro.k@uqam.ca)

F4C	**Incentives** **Room / Salle: Nancy et Michel Gaucher** **Chairperson / président: Pierre Chaigneau**
15:30	EVALUATING RECENT CHANGES IN CEO INCENTIVE PAY **Pierre Chaigneau**, HEC Montréal (Pierre.chaigneau@hec.ca)
15:55	OPTIMAL CEO INCENTIVES AND INDUSTRY DYNAMICS **Antonio Falato**, Federal Reserve Board (Antonio.Falato@frb.gov) Dalida Kadyrzhanova, University of Maryland (dkadyrz@rhsmith.umd.edu)
16:20	DEVELOPING THE RANK-WEALTH HYPOTHESIS **David Newton**, Concordia University (davenewt@jmsb.concordia.ca)
16:45	DOES BACKDATING EXECUTIVE STOCK OPTIONS REALLY HURT SHAREHOLDERS? R. Glenn Hubbard, Columbia Business School (rgh1@columbia.edu) Michael F. Koehn, Analysis Group (mkoehn@analysisgroup.com) Marc Van Audenrode, Analysis Group (mvanaudenrode@analysisgroup.com) Jimmy Royer, Analysis Group (jroyer@analysisgroup.com) **Philippe Grégoire**, Université Laval (philippe.gregoire@fsa.ulaval.ca)

Résumés / Abstracts

Les résumés sont classés par ordre alphabétique du nom du présentateur.
Abstracts are ordered alphabetically by family name of the presenter.
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ESTIMATION OF STRUCTURAL MODELS VIA FILTERING TECHNIQUES

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The complete specification of structural models appearing in the literature of credit risk requires the estimation of their parameters. Given that state variables underlying the model are not observable, the estimation procedure is carried out with observable quantities such as equity prices or credit derivatives, which are nonlinear functions of the state variables. This talk discusses filtering techniques that exploit the information coming from observable variables to recursively update the distribution of the state variables, which is later used in the estimation of the model parameters.

MANAGERIAL INCENTIVES AND THE RISK-TAKING BEHAVIOR OF HEDGE FUND MANAGERS

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We use a binomial model to assess the impact that endogenous changes in the volatility of the fund have on manager fees and on investor wealth, and to find the optimal volatility. On a multi-period framework, our results suggest that the manager will not increase the volatility blindly in order to maximize the value of his option-like contract because an increase in risk impacts negatively on the investor's wealth. These results are in line with the findings of Panageas and Westerfield (2008) and suggest that with an incentive contract over a time horizon superior to one year, the manager will not take excessive risk given the path-dependent nature of the payoffs. The one-period analysis also shows that the optimal volatility of the fund is related to its size, the moneysness of the option, the incentive fee and the management fee rates, the return required by the investor and the expected return of the fund.

AMERICAN AND BERMUDAN OPTION PRICING BY FOURIER TRANSFORM

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This paper sets up a new numerical method to price American options on assets with continuous dividend yield. The method relies on two aspects: the expansion of the continuation value on the Hilbert space spanned by Hermite polynomials, and the computation of the expansion coefficients through the FFT technique. For both calls and puts, analytic expressions for the Fourier transform of coefficients is guaranteed if the the characteristic function of log-prices is analytic, which makes the method universal in its applicability to any model with closed-form characteristic function. The algorithm is further simplified if returns are assumed to be IID, or of Levy type. Numerical tests are performed on popular Levy models such as the lognormal model of Black and Scholes (1973), the Compound Poisson process of Merton(1976), and the Variance Gamma Model of Carr, Chang and Madan (1998).

HEDGE FUND PREDICTABILITY UNDER THE MAGNIFYING GLASS: THE ECONOMIC VALUE OF FORECASTING INDIVIDUAL FUND RETURNS

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The recent financial crisis has not spared the hedge fund industry and has highlighted the need to search for suitable forecasting models for hedge fund performance. In this paper, we carefully assess the true in-sample hedge fund predictability on a fund by fund basis and document differences in total return and alpha predictability across fund styles and predictors. We examine whether predictability can be exploited out-of-sample by an investor under realistic conditions. We develop and apply a framework in which to carefully assess the true forecasting power of economic variables in predictive regressions in a multi-asset setting. Using monthly returns for more than 7,000 individual hedge funds during the period January 1994 through December 2008 we find that the economic value of predictability can be improved by employing a strategy that combines forecasts from several single predictive regressions. We contribute to the literature on the economic and statistical sources of combination forecasts' performance by highlighting benefits of combination forecasts that arise in a multi-asset multi-predictor framework. Finally, we use the financial crisis of 2008 as a natural out-of-sample test and show that combination forecasts continue to produce superior risk-adjusted performance.

INDUSTRY EQUILIBRIUM IN CONTINUOUS TIME

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A typical competitive industry equilibrium model has the following main ingredients: a continuum of competitive value maximizing firms, idiosyncratic and/or aggregate demand/productivity shocks, production functions and capital adjustment technologies which are common to all firms. In such models, the equilibrium outcome is generally described by some distribution over the set of firms. Depending on the precise nature of the model this distribution might describe:the size of the firm, the firm production capacity, whether the firm is active or not. Except for some simple models of entry and exit, very little is known about the equilibrium price and its dynamics. We formulate a continuous time, infinite horizon model of competitive industry equilibrium with the following main features: constant returns to scale, idiosyncratic and aggregate shocks, quadratic adjustment costs. Instead of focusing on the distribution of firm sizes we focus on the equilibrium price. We show that the price can be obtained by solving a FBSDE and prove existence and uniqueness of equilibrium for some basic specification of the model and present explicit computation of equilibrium prices.

DIFFUSION INDEX APPROACH TO THE PARAMETRIC PORTFOLIO OPTIMIZATION

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In this paper we combine two approaches to build an optimal portfolio that takes into consideration financial and macroeconomic information. The first approach consists in modeling directly the portfolio weight in each asset rather than modeling returns. The second one consists in using principal components analysis to extract relatively few indexes, factors, based on many predictors and time series observations, rather than considering only asset's characteristics in modelling portfolio weights. Feasible optimal portfolio, which consists in choosing the optimal portfolio based on the estimated factors, is shown to be asymptotically efficient in the sense that the difference between the feasible optimal portfolio and the infeasible optimal portfolio constructed using the actual values of the factors converge in probability to 0 as both the number of factors and the number of observations grow large.

CREDIT RISK MODEL: ON THE NON-LINEAR RELATIONSHIP BETWEEN DEFAULT INTENSITY AND LEVERAGE

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This paper presents a hybrid credit risk model where default results from an external source, highly correlated with leverage. A parametric transformation of the debt ratio serves as an intensity process meaning that default can occur even if the company has a positive financial outlook, or on the opposite, can survive even if the firm is highly indebted. The sensitivity of the default of a firm to its debt ratio depends on the parameters of the intensity process. Such an approach provides for an endogenous recovery rate distribution that is inversely proportional to the solvency of the company. Different capital structures are proposed for which quasi closed-form solutions exist for the default probability and the price of zero-coupon bonds. The model also easily accommodates stochastic interest rates. Since the model is defined in a framework where both physical and martingale measures are well defined, it can be used for pricing and risk management purposes. The model is fitted to each of the firms of the CDX NA IG and HY indices using non-linear Kalman filters (EKF and UKF). An empirical study is then conducted to understand the behavior of the model with real data.

REAL OPTION FINANCING UNDER ASYMMETRIC INFORMATION

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I study the impact of capital market imperfections on the exercise of a real option. An entrepreneur has private information about a venture for which she seeks outside funding. An initial investment gives access to a continuous flow of information about the pro ject. The duration of that experimentation phase is used to signal quality and investment may be delayed relative to the first best. Investors use milestone contracts, and the entrepreneur is granted stock options with a vesting period or receives a compensation in case of failure. The pay-performance sensitivity of her compensation is correlated with risk taking. The initial mix of inside and outside financing affects the timing of future investment, in line with empirical evidence.

UTILISATION DE FONDS DE COUVERTURE DANS UN PORTEFEUILLE DE CAISSE DE RETRAITE

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Un fonds de couverture pourrait être défini comme : « *Un fonds qui permet de générer de la valeur sans égard à la direction des marchés financiers ».* Ajouter un ou plusieurs fonds de couvertures dans un portefeuille de caisse de retraite exige une bonne compréhension des risques liés à leurs utilisations. Il faut comprendre que la distribution des rendements, à la fois pour les portefeuilles traditionnels et pour les fonds de couvertures dévient de la normalité. À cause de la non-normalité des rendements les mesures de corrélations linéaires ne peuvent pas être appliquées. La théorie des copules peut alors aider le gestionnaire de fonds à cartographier les risques afin d'établir la meilleure combinaison avec un portefeuille d'actions ou d'obligations. La théorie des copules est utilisée pour dissocier la force de dépendance de la distribution conjointe des rendements. Il existe une quantité optimale de fonds de couvertures différents qui peut être ajoutée à un portefeuille de caisse de retraite, sans quoi, l'effet positif de la diversification s'estompe graduellement avec l'ajout de nouveaux fonds.

DO IMPLICIT BARRIERS MATTER FOR GLOBALIZATION?

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Understanding and measuring the evolution of market integration and its variation across countries is of critical importance. Market liberalization may not result in global pricing or increased market integration if implicit barriers are relevant. We use the conditional version of the Errunza and Losq (1985) model to test this proposition, and estimate pricing of investable indices for 22 emerging markets. Our results show that local factors are priced and the implicit barriers related to institutional environment, corporate governance and quality of information are significantly associated with the integration measure and hence play a major role in globalization.

THE EFFECT OF MONETARY POLICY ON CREDIT SPREADS

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In this paper, we analyze the effect of monetary policy on yield spreads between corporate bonds with different credit ratings over changing conditions in the economy. Using futures data on the Fed funds rate, we distinguish between expected and unexpected changes in monetary policy. We find that unexpected changes in the Fed funds rate do not have a significant effect on changes in credit spreads when we do not control for different conditions in the economy. We then distinguish between three different cycles in the economy: business, credit and monetary policy cycles. In line with predictions of imperfect capital market theories, credit spreads widen (narrow) following an unexpected monetary policy tightening (easing) during periods of poor economic and credit market conditions. Several robustness tests suggest that our results are not due to possible endogeneity problems, lack of control variables or identification methodology for different cycles.

EVALUATING RECENT CHANGES IN CEO INCENTIVE PAY

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Using data which spans most of the past two decades, we study the evolution of the pay-for-performance of S\&P500 CEOs. First, we analyze the power of incentives. In contrast to previous studies, we use ex-ante measures of incentives. We also introduce a new microeconomically founded and empirically calibrated metric, and we decompose the change in total incentives over time into three factors. Second, we analyze punishments for failure and risk-taking incentives. We argue that current theories of CEO risk-taking fail to account for their time-varying nature. We propose a simple model of risk-taking which explains the changing shape of CEO compensation.

MIGRATION DEPENDENCE AMONG THE U.S. BUSINESS SECTORS

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Based on the methodology of Jafry and Schuermann (2004) to summarize the rating transition matrix into a scalar (a mobility index), we build up time series of theses indices for each U.S. business sector. The database used consists on rating transitions reported by Moody's from the first quarter of 1980 to the first quarter of 2005. As a first step, we check if the crisis transmission phenomenon exists within each business sector. Then, we test for possibly crisis transmission phenomenon among sectors by estimating a Markov Switching Vector Auto Regression model. The results obtained provide evidence of high and low correlation regimes and prove default contagion among some sectors. For example, more downgrades in the U.S. industrial sector during the high correlation regime imply more downgrades in the U.S. banking sector during the next three months.

DYNAMIC HEDGE FUND STYLE ANALYSIS WITH ERRORS-IN-VARIABLES

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This paper revisits the traditional return-based style analysis (RBSA) in presence of time-varying exposures and errors-in-variables (EIV). We first apply a selection algorithm using the Kalman filter to identify the more appropriate benchmarks for the analysed fund return. Then, we compute their corresponding higher moment estimated errors-in-variables, i.e. the measurement error series introducing the (cross) moments of order three and four. We adjust the selected benchmarks by subtracting their higher moments estimated EIV from the initial return series, to obtain an estimate of the true uncontaminated benchmarks. We finally run the Kalman filter on these adjusted regressors. Analysing EDHEC alternative indexes styles, we show that this technique improves the factor loadings and permits to identify more precisely the return sources of the considered hedge fund strategy.

INTERNATIONAL CROSS-LISTINGS AND SUBSEQUENT SECURITY-MARKET CHOICES: EVIDENCE FROM ADRS

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In this paper, we study the link between the ADR-listed firms' attributes and their subsequent security-market choices. First, we find that following ADR listings, foreign firms increase their equity and debt issues, especially emerging market firms. Further, being an emerging market firm increases the primary shares in new equity issues after ADR listings. Following the enactment of the Sarbanes-Oxley (SOX) Act, we find that more emerging market firms, under Level III and Rule 144A, issue equity compared to the pre-SOX period. Finally, we show that ADR firms rely more on primary-equity resources than on debt following their listings, especially emerging market firms.

PORTFOLIO SELECTION WITH TRANSACTION COSTS AND JUMP-DIFFUSION ASSET DYNAMICS: A NUMERICAL APPROACH

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We derive the boundaries of the region of no transaction in a two-asset portfolio selection problem of an investor with isoelastic utility and with a finite horizon when the risky asset follows a mixed jump-diffusion process in the presence of proportional transaction costs. These boundaries are shown to differ from their diffusion counterparts in relation to the jump intensity and the risk premium, as well as the investor risk aversion coefficient. We use a discretization of the continuous time distribution that converges to jump-diffusion and a general numerical approach for iid risky asset returns in discrete time. We find that our approach converges efficiently to the continuous time results in cases where these results are known. Comparative results with a recent study on the same topic are presented and it is shown that the numerical algorithm has equally attractive approximation properties to the unknown continuous time limit.

WHAT ABOUT UNDEREVALUATING OPERATIONAL VALUE AT RISK IN THE BANKING SECTOR?

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The objective of this article is to develop a precise and rigorous measurement of a bank's operational VaR. We compare our model to the standard model frequently used in practice. This model is constructed based on lognormal and Poisson distributions which do not take into account any data which fall below the truncature threshold and undervalue banks' exposure to risk. Our risk measurement also brings into account external operational losses that have been scaled to the studied bank. This allows us to account for certain possible extreme losses which have not yet occurred. The GB2 proves to be a good candidate for consideration when determining the severity distribution of operational losses. This article argues in favor of the relevance of its application in modeling operational risk. For the tails of the distributions, we have chosen the Pareto distribution. We have also shown that the Poisson model, unlike the negative-binomial model, is retained in none of the cases for frequencies. Finally, we show that the operational VaR is largely underestimated when the calculations are based solely on internal data.

AMERICAN OPTION PRICING WITH QUASI-MONTE CARLO SIMULATIONS

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We price American options using the Longstaff-Schwartz method combined with quasi-Monte Carlo simulations: instead of using pseudo-random numbers (standard Monte Carlo), the underlying assets are simulated from quasi-random numbers (quasi-Monte Carlo). Much less simulations need to be carried out with quasi-Monte Carlo than with standard Monte Carlo to reach the same accuracy. We consider an American put option, an American-Asian call option and a callable bond.

BUSINESS CONDITIONS, MARKET VOLATILITY AND OPTION PRICES

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We introduce a dynamic volatility model in which stock market volatility varies around a time-varying fundamental level. This fundamental level is determined by macroeconomic risk, quantified using a MIDAS structure to account for changes in the recently introduced ADS Business Conditions Index. The new model outperforms the benchmark in fitting asset returns and in pricing options, especially around the 1990-1991 and 2001 recessions. The benchmark model exhibits a counter-cyclical option-valuation bias across all maturities and moneyness levels, and the newly introduced model removes this cyclicality by allowing the conditional expected level of volatility to evolve with business conditions. We extract the volatility premium implied by the model and find that an economically significant 13% of its variation through time can be explained by the impact of macroeconomic risk.

A MODEL OF FACTORS-REFERENCE PREFERENCES

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Econometric analysis of large dimensional factor models has been widely investigated during the last decade. This paper assesses the ability of using a factor structure to capture variations in a large number of economic indicators and use the resulting factors to solve the equity premium puzzle. This is accomplished by applying the method of principal components to targeted macro-variables selected by market to extract the fundamental economic factors and use them to model the agent reference level in his preferences.

THE RESOURCE CURSE: A CORPORATE TRANSPARENCY CHANNEL

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We investigate a new channel through which the “resource curse” can operate. In countries with insecure property rights, corporate profits in natural resource industries are at greater risk of expropriation. Corporations can mitigate the risk of expropriation by reducing corporate transparency. Using a comprehensive panel of 32,000 listed companies from 84 countries we find that transparency of oil-price-dependent companies is lower in countries with insecure property rights. This effect is stronger during periods of high oil prices. Furthermore, corporate growth is hampered in oil-price-sensitive industries because of less efficient capital allocation driven by adverse effects of lower transparency.

DEBT, EQUITY AND ASSET VALUES WITH CHAPTER 11, CHAPTER 7 AND BUSINESS CYCLES: A STRUCTURAL EQUILIBRIUM APPROACH

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We propose a consumption-based structural equilibrium model with business cycles to examine the economic implications that arise from the voluntary filing of Chapter 11. We find that when debtors make endogenous bankruptcy decisions, the firm value suffers in both economies. This ex-ante reduction in firm value is twice than in a benchmark that ignores changes in economic conditions. We provide analytical expressions for the firm's securities before and during Chapter 11. We show that in addition to macroeconomic conditions, countercyclical distress and liquidation costs are important to address the credit spread, equity premium and leverage puzzles.

OPTIMAL CEO INCENTIVES AND INDUSTRY DYNAMICS

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We develops a competitive equilibrium model of CEO compensation and industry dynamics. CEOs make product pricing and product improvement decisions subject to shareholders' compensation choices and idiosyncratic shocks to product quality. The choice of high-powered incentives optimally trades-off the benefits from expected product improvements and the associated agency costs. In market equilibrium, the interaction between CEO pay and product market decisions affects the stationary distribution of firms. We characterize a dynamic feedback effect of industry structure on CEO incentives. As a result of this effect, we predict an inverse relation between the magnitude of the performance-based component of CEO pay and, (i) across industries, the degree of heterogeneity of industry structure; (ii) within industries, firm position with respect to its peers. We empirically estimate pay-performance sensitivity for a large sample of U.S. CEOs and other top executives over the 1993 to 2004 period and find strong support for our theory. Our results offer a novel product market rationale for the increased reliance of CEO pay on bonuses and stock options over the 1990s.

FURTHER EVIDENCE ON MULTIVARIATE CONDITIONAL ASSET PRICING AND FINANCIAL INTEGRATION IN NORTH AMERICA

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We test financial market integration in North America from January 1984 to December 2003. We use an Arbitrage Pricing Theory (APT) framework to estimate in time series several unconditional and conditional factor models. We estimate several domestic and international models and test different hypotheses of integration. The results show three important conclusions: 1) tests of financial market integration are affected by conditioning variables. While the unconditional models support strong financial integration, the evidence toward financial integration is weaker when conditioning variables are introduced. In term of the joint significance of the intercept, international conditional models fare better than the other models estimated. 2) Asset pricing anomalies such as size, book-to-market and momentum as well as the information set of conditioning variable vary across time and country. 3) Variations in asset pricing anomalies have little incidence on financial market integration.

ON THE HANSEN-JAGANNATHAN DISTANCE WITH A NO-ARBITRAGE CONSTRAINT

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We provide an in-depth analysis of the theoretical and statistical properties of the Hansen-Jagannathan (HJ) distance that incorporates a no-arbitrage constraint. We show that for stochastic discount factors (SDFs) that are spanned by the returns on the test assets, testing the equality of HJ-distances with no-arbitrage constraints is the same as testing the equality of HJ-distances without no-arbitrage constraints. A discrepancy can only exist when at least one SDF is a function of factors that are poorly mimicked by the returns on the test assets. Under a joint normality assumption on the SDF and the returns, we derive explicit solutions for the HJ-distance with a no-arbitrage constraint, the associated Lagrange multipliers, and the SDF parameters in the case of linear SDFs. This allows us to show that nontrivial differences between HJ-distances with and without no-arbitrage constraints can only arise when the volatility of the unspanned component of an SDF is large and the Sharpe ratio of the tangency portfolio of the test assets is very high. Finally, we present the appropriate limiting theory for estimation, testing, and comparison of SDFs using the HJ-distance with a no-arbitrage constraint.

MUTUAL FUND'S R2 AS PREDICTOR OF PERFORMANCE

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We propose that fund performance is predicted by its R2, obtained by regressing its return on the Fama-French-Carhart four benchmark portfolios. Lower R2, or higher idiosyncratic risk relative to total risk, measures selectivity or active management. We show that lagged R2 has significant negative predictive capability in predicting alpha or Information Ratio. This is consistent with Cremers and Petajisto's (2008) results on the effect of selectivity. Funds ranked into lagged lowest-quintile R2 and highest-quintile alpha produce significant alpha of 2.8%. Also, both fund RMSE and return volatility predict the following year's performance with significant positive and negative coefficients, respectively. Across funds, R2 is an increasing function of fund size and a decreasing function of its age, its manager tenure and its past performance, but better performance induces funds to subsequently increase their R2.

LE CAPITAL ÉCONOMIQUE CHEZ LES ASSUREURS OBLIGATAIRES

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Dans cet article, nous étudions les diverses mesures de risque recensées dans la littérature pouvant s'appliquer au problème de l'évaluation du capital économique chez les assureurs obligataires. En nous inspirant du modèle structurel de Merton, nous modélisons les risques de réclamations chez un assureur obligataire où la dépendance entre les défauts sur les obligations est prise en compte. À partir de notre modèle, nous appliquons cinq mesures de risque et observons leur comportement respectif pour une série de scénarios de chocs. Pour finir, nous proposons d'adapter la tarification des assurances obligataires en considérant leur contribution au risque total de l'assurance et du capital économique en découlant. Nous concluons entre autres que les primes d'assurance ainsi obtenues peuvent dépendre grandement du choix de la mesure de risque adoptée par les gestionnaires de l'assureur.

DOES BACKDATING EXECUTIVE STOCK OPTIONS REALLY HURT SHAREHOLDERS?

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This paper shows that given the non-transferability nature of executive stock options (ESOs), granting in-the-money ESOs may be less costly to existing shareholders than granting at-the-money ESOs. Hence the practice of options backdating that took place during the 1990s does not necessarily harm existing shareholders.

OPTION PRICING AND DYNAMIC DISCRETE TIME HEDGING FOR REGIME-SWITCHING MODELS

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We propose a methodology for pricing and hedging options that responds to the main criticisms of the Black-Scholes-Merton model: unrealistic continuous hedging and constant volatility, Gaussian nature, and serial independence of log-returns. After recalling some results on optimal dynamical hedging in discrete time, we show how to implement them for a class of regime-switching models. We also compare our discrete time methodology to a continuous time model approximation using regime-switching geometric Brownian motion, for which it has recently been shown that the optimal hedging and associated pricing can be deduced from a risk neutral distribution. All the steps of the implementation are illustrated through in-sample and out-of-sample experiments to demonstrate the benefits from dynamic discrete time hedging using regime-switching models.

FORWARD-BACKWARD SDES AND TRANSFORMS FOR AFFINE JUMP-DIFFUSIONS

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Duffie, Pan, and Singleton (Econometrica, 2000) indicate how to use general transforms, including Laplace and Fourier transforms as special cases, of an affine jump-diffusion (AJD) in the valuation of derivative securities where the underlying asset price is driven by the AJD. We characterize the general transforms of an affine-jump diffusion in terms of forward-backward stochastic differential equations (FBSDE). An existence and uniqueness result for the FBSDE provides an explicit solution. These results generalize our previous work to include jump components in the state process and consider general transforms.

LARGE PORTFOLIO RISK MANAGEMENT WITH DYNAMIC COPULAS

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Modeling the dynamic high-dimensional multivariate distribution is very useful for active risk management and optimal portfolio allocation; however, available dynamic models are not easily applied for high-dimensional problems due to the curse of dimensionality. In the light of the recent development of multivariate GARCH techniques for a large number of underlying securities, I extend the framework of the Dynamic Conditional Correlation/Equicorrelation (DCC/DECO) (Engle, 2002 and Engle and Kelly, 2008) and an extreme value approach (McNeil and Frey, 2000) into a series of Dynamic Conditional Elliptical Copulas. By constructing portfolios of 89 stocks from CDX-listed firms between 1995 and 2005, I examine Value at Risk (VaR) and Expected Shortfall (ES) by Monte Carlo simulation for passive portfolios and dynamic optimal portfolios through Mean-Variance and ES criteria.

SUBSAMPLING HIGH FREQUENCY DATA

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Volatility estimation is a key component in the evaluation of financial risk. Financial econometrics continues to make progress in developing more robust and efficient estimators of volatility. But for some estimators, the asymptotic variance is hard to derive or may take a complicated form and be difficult to estimate. To tackle these problems, the current paper develops an automated method of inference that does not rely on the exact form of the asymptotic variance. The need for a new approach is motivated by the failure of traditional bootstrap and subsampling variance estimators with high frequency data, which is explained in the paper. The main contribution of this paper is to propose a novel way of conducting inference for an important general class of estimators that includes many estimators of integrated volatility. A subsampling scheme is introduced that consistently estimates the asymptotic variance for an estimator, thereby facilitating inference and the construction of valid confidence intervals. The new method is applied to the integrated volatility estimator of Ait-Sahalia, Mykland, and Zhang (2009) in the presence of autocorrelated and heteroscedastic market microstructure noise, for which there is no alternative inferential method in the literature. Monte Carlo study illustrates the finite sample properties of the proposed method.

EMPIRICAL EVIDENCE OF THE EFFECTS OF NEWS IN THE PRICING OF EXHAUSTIBLE NATURAL RESOURCES

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This paper provides strong empirical evidence for the role of news that change the expectations on the future in determining the pricing of exhaustible natural resource stock. Following the recent literature on the pricing equation of nonrenewable resource stock derived by Kakeu (2009), we used an econometric approach which is a combination of Latent Factors method allowing to use both financial and macroeconomic variables, and the Dynamic Conditional Correlation (DCC) by Engle (2002). The results obtained for oil show that parameters related to the role of news is statistically significant showing that shocks to expected consumption growth are priced in resource market. The estimated elasticity of intertemporal substitution EIS is positive and smaller than one which is consistent with literature on equity premium puzzle. These findings suggest that oil resource investors prefer an earlier resolution of the uncertainty or are comparatively more risk-averse (relative to the time-separable utility). Moreover, this study provides another way of evaluating the Duffie and Epstein continuous-time recursive utility model.

MUTUAL FUND TOURNAMENTS

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This paper studies risk tournament among 1,233 actively managed U.S. equity funds over the period 1991-2005. Using a contingency methodology, we reach mixed results related to the existence of a tournament phenomenon: loser (winner) funds do not systematically increase (decrease) their risk in the second half year. We show that sorting on cumulative returns suffers from an upward (downward) tournament bias and downward (upward) inverse tournament bias if the correlation between risk and return is positive (negative). When we sort funds on an orthogonalized measure of cumulative returns, we observe qualitative changes in the final results. We find that about 10% of additional correlation between risk and returns artificially adds 1% in tournament frequencies. Furthermore, we link the risk adjustment ratio (RAR) to fund characteristics. We find that the RAR is higher for funds that exhibit low flow-performance dependence, high mean returns, low total risk and high inflows. Age and TNA are also negatively related to the RAR. Finally, when analyzing holdings of funds, we find no strong evidence that loser (winner) funds increase (decrease) the allocation in riskier stocks for the second half year.

ON THE DETERMINANTS OF THE IMPLIED DEFAULT BARRIER

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We use the maximum likelihood estimation approach to estimate the default barriers from market values of equities for a sample of 762 public industrial Canadian firms. This allows us to estimate the asset instantaneous drift, volatility and barrier level simultaneously, when the firm's equity is priced as a Down-and-Out European call option. We find that the estimated barrier is positive and significant in our sample. Moreover, we compare the default prediction accuracy of the DOC framework with our implementation of KMV-Merton approach. Using probit estimation, we find that the default probability from the two structural models provides similar in-sample fits, but the barrier option framework achieves better out-of-sample forecasts. Regression analysis shows that leverage is not the only determinant of the default barrier; it is also positively related to financing costs, and negatively to liquidity, asset volatility and firm size. We find that liquidation costs, renegotiation frictions and equity holders' bargaining power increase the implied default barrier level.

ON THE VALUE OF LIQUIDITY

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This paper presents and discusses different approaches to estimate the additional value of liquid investments relative to illiquid ones.

ON THE EFFECTIVENESS OF RANDOMIZED QUASI-MONTE CARLO IN FINANCE

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We summarize the main ideas and results on randomized quasi-Monte Carlo (RQMC) methods, discuss their practical aspects, and give several numerical illustrations in finance. RQMC methods provide unbiased estimators of a mathematical expectation whose variance sometimes converge at a faster rate than with standard Monte Carlo, as a function of the number of simulation runs. We will also discuss an RQMC variant specially designed for the simulation of Markov chains over a large number of steps.

RISK-MANAGEMENT LESSONS FROM BONUS SCHEMES

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Management compensation packages typically include some form of bonus payment; these payments shall provide incentives for effort, but recently they were heavily criticized for their perceived excessive risk-taking incentives. This paper presents a continuous-time model in which the manager decides on the risk and effort level of the bank. A single-period model is nested into continuous-time; for this we confirm prior results on risk and effort levels and show that they misrepresent actual risks taken in our dynamic continuous-time setup. We show that with current bonus schemes risk and effort levels are typically of bang-bang type: the manager takes either maximal or minimal risk and either maximal or minimal effort. The bonus-malus scheme is believed by the public to limit risk-taking; we show that before the deferral date it behaves like a call option type bonus scheme and thereafter considerably hampers risk and effort. We also discuss how bonus scheme should look like that incentivizes the manager to pick a target risk level. Finally, we illustrate our results quantitatively.

IMPROVING THE LEAST-SQUARES MONTE CARLO METHOD BY IMPOSING STRUCTURE

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The Least-Squares Monte Carlo method of Longstaff and Schwartz (2001) is a numerical method for option pricing with many potential risk factors. An important choice in the method is the number of regressors to use. Specifically, using too few regressors leads to biased results whereas increasing the number can lead to convergence problems. This is so particularly when considering multiple risk factors. In this paper we show that by imposing structure in multiple dimensions we can improve the method by reducing the bias. Our approach uses an improved regression method that imposes constraints on partial derivatives based on Beresteanu (2004).

DOOMSDAY FOR RISK MODELS OR THE CHANCE FOR A NEW PARADIGM?

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In the years prior to the crisis, financial institutions invested a vast amount of money into risk management tools and systems. However, it is obvious that these sophisticated tools failed to either predict the crisis or safeguard the banking industry from its effects. In fact, some market participants complain that overreliance on such models may even have contributed to the problem by encouraging blind faith in “synthetic quantitative indicators”, as in the VaR approach. In comparison many corporates have not invested in a systematic understanding of the risks impacting their business at all or only to an insufficient degree. In this paper we will argue that a lack of understanding of their underlying limitations meant risk models were improperly used. At the same time, supporting tools for key managerial decisions were not available. This failure calls for a paradigm shift in decision making support: one that rejects a purely mathematical view for a managerial approach grounded in insight and foresight.

CDS TREES

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The credit default swap (CDS) market has gained importance and popularity by responding to the sophisticated hedging and investment strategies of investors acting in the corporate credit market. The development of sound and flexible models that can be easily calibrated to market data and allow for the pricing of the growing family of CDS derivatives has never been as important and timely as in the current market environment. This paper answers these needs by providing an arbitrage-free tree approach of dynamic mean-reverting leverage that allows for a perfect matching of the market CDS curve and a robust calibration to market volatility data. The proposed CDS tree model simplifies and unifies the pricing of both plain-vanilla and complex CDS derivatives, including European and Bermudan CDS options as well as constant maturity CDS.

EVIDENCE ON THE JOINT DETERMINATION OF CASH HOLDINGS AND HEDGING

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The importance of cash holdings and hedging activities has been recognized in the corporate finance literature, especially in a context where they provide sufficient liquidity to take advantage of worthy future investment opportunities. In this paper, we investigate a firm's joint decision to hold cash and to hedge in the presence of financial constraints. We develop a conceptual framework which considers the costs of holding cash and the costs of hedging, and we test it empirically on a panel of manufacturing firms. We find evidence of a negative sensitivity of hedging to cash flow, indicating the role of hedging in mitigating underinvestment for financially constrained firms.

THE UNCONDITIONAL AND CONDITIONAL EXCHANGE RATE EXPOSURE OF U.S. FIRMS

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We examine the foreign exchange exposure of U.S. firms to two currency indices: the major (MJ) currency index and the emerging markets (EM) currency index. Using a panel approach, we find statistically and economically significant unconditional exposure to the two currency indices for U.S. firms in eleven industries. Our results underscore the importance of methodology for the study of exposure. We then model the dynamics of currency exposure as a function of macro variables and firm characteristics. Exposure to the two real currency indices is significantly time-varying and its dynamics are mainly driven by the macro variables. Exposure increases during economic contractions.

ÉVALUATION DES OPTIONS DANS LES PRODUITS STRUCTURÉS DE DÉTAIL

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Nous présentons d'abord les particularités des options dans les certificats de placements garantis liés aux marchés (quanto, long terme, formule de paiement exotique, paniers de titres). Nous élaborons sur différentes méthodes d'évaluation (temps discret et continu) des options transigées *OTC* (au comptoir) où les données sont inexistantes. Nous faisons également ressortir les forces et faiblesses de ces méthodes d'évaluation classiques pour ces options exotiques. Nous concluons en présentant une méthode d'évaluation heuristique pour les options vanilles sur panier de titres qui sont très populaires auprès de la clientèle de détail au Canada.

THE INFORMATION CONTENT ON REALIZED VOLATILITY

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We seek to quantify in a practical way the amount of information which various implementations of realized volatility can bring to the forecasting of volatility. We consider discrete time stochastic volatility (SV). We start with an AR(1) specification for the volatility equation as in standard SV models. This model is estimated by Bayesian MCMC techniques which provide an optimal filter for volatility. Then, we extend the model to incorporate the intra-day information, under the form of an exogenous variable in the volatility equation. We simulate models and forecast volatility using both models. This approach is in contrast with most of the empirical realized volatility literature which documents the ability of realized volatility to forecast itself. In our empirical application, we use exchange rate and stock data.

DEVELOPING THE RANK-WEALTH HYPOTHESIS

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This paper develops a model that shows how individuals' concern about their rank of wealth is fully rational. The model can be used to motivate a 'keeping up the with joneses' preference. More intriguingly the model also eliminates a number of financial economic anomalies such as observed underdiversification, lottery regressivity and the endowment effect.

SEGREGATING CONTINUOUS VOLATILITY FROM JUMPS IN LONG-RUN RISK-RETURN TRADE-OFFS

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We adapt Bandoff Nielsen and Shephard (2004a, 2005) findings to Bandi and Perron (2008) framework in order to nail the relationship between past market realized volatility components (namely integrated volatility and jumps) and future market excess return at various horizon. We document linear dependence dynamics between smooth sample path volatility and discontinuous squared jump processes and we characterize risk-return trade-offs at di¤erent levels of aggregation. From a statistical standpoint, we derive the asymptotic joint distribution for the slope vector and the limiting approximation of the corresponding covariance matrix. Cautious testing for restrictions on slope coefficients can be performed from these results. Particular attention is paid to the rescaled t -statistic for investigating the di¤erence between two slopes across level of aggregation under the null that there is no monthly risk-return dependence, thus generating a general tool to analyse directly any break in the slope coefficient series. This exercise yields a detailed panorama of the term structure of the conditional prediction of market price of risk and risk aversion and opens up future useful implications in portfolio management and market timing investment strategies.

ARE ANALYST RECOMMENDATIONS INFORMATIVE? EVIDENCE FROM INTRADAY JUMPS

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Using jump detection techniques with high frequency data, we examine the informativeness of analyst recommendations for a large sample of NYSE stocks between 2002 and 2007. We find that a nontrivial amount of jumps are associated with analyst recommendations. Regression analysis indicates that analysts' recommendations are more likely to cause jumps than earnings announcements, macroeconomic events, or management guidance. Further, we find recommendations from all-star analysts, affiliated analysts, and analysts with more experience are more likely be associated with jumps. Our results suggest that analysts are important information intermediaries.

FEAR OF DEFAULT AND VOLATILITY IN A DYNAMIC FINANCIAL-MARKET EQUILIBRIUM

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This article presents a dynamic general-equilibrium economy populated by investors with heterogeneous beliefs in which the default prospect of one population changes endogenously over time. Due to the heterogeneity of beliefs, investors disagree about the unobserved drift of fundamentals (endowments), generating sentiment risk. One-sided limited commitment and fear of default introduce an endogenous no-default borrowing constraint that increases the sensitivity of the state price density to sentiment risk every time it binds. Sentiment and endowments jointly determine the shifting between default prospect regimes, characterized by the binding or non-binding of the endogenous no-default borrowing constraint. I show that this model is able to replicate several features of stock return volatility, including volatility clustering, asymmetry in the stock-return volatility relationship, and the pricing of multi-factor volatility components in the cross section of expected stock returns. In addition, the model generates testable implications that are supported by recent empirical evidence.

BETAS, HEDGE FUNDS AND THE MYTH OF MARKET NEUTRALITY

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Market neutral funds are commonly advertised as alternative investments offerring returns which are uncorrelated with the broad market. Utilizing recent advances in financial econometrics we demonstrate that constructing market neutral funds from monthly return data can be widely inaccurate. Given the monthly frequency is the most common for return measurement in the hedge fund industry, our findings highlight the need for higher frequency return data to be more commonly utilized. We demonstrate the use of daily returns to achieve a more market neutral portfolio, relative to the case of only using monthly returns.

RISK CASCADES: EXPLORING RISK PROPAGATION AND SENSITIVITY

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Most risk-assessment processes expose only the most direct threats facing a company and neglect indirect ones that can have an equal or greater impact. The financial crisis has reminded us of the valuable lesson that risks gone bad in one part of the economy can set off chain reactions in areas that may seem completely unrelated. What can companies do to prepare themselves? There is no easy formula for anticipating the way risks propagate through a company or an economy. But we've found that executives who systematically examine the way risks cascade across the whole value chain—including competitors, suppliers, distribution channels, and customers—can foresee and prepare for second-order effects more successfully. In the process, they can learn valuable insight into exactly how sensitive their business is to key macroeconomic risk factors.

ACCRUALS QUALITY, STOCK RETURNS, AND MACROECONOMIC CONDITIONS

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This study examines whether and how earnings quality, measured as accruals quality (AQ), affects the cost of equity capital. Using two-stage cross-sectional regression tests, we find that the AQ risk factor is significantly priced, after controlling for low-priced stocks. This result is robust in tests using individual stocks, various portfolio formations, and different beta estimations. Furthermore, we show that AQ and its pricing effect systematically vary with business cycles and macroeconomic variables. In particular, this pricing effect is prominent in total AQ and innate AQ but not in discretionary AQ. The risk premium associated with AQ exists only in economic expansion but not in recession periods. Poorer AQ firms are more vulnerable to macroeconomic shocks. The risk premium and the dispersion of AQ are also related to future economic activity. Overall, our results suggest that AQ contributes to the cost of equity capital and that its pricing effect is associated with fundamental risk.

COUVERTURE DU RISQUE D'INFLATION À LONG TERME DES FONDS DE PENSION À L'AIDE D'INVESTISSEMENTS ALTERNATIFS

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Cette étude vise à montrer l'intérêt pour des fonds de pension d'introduire des actifs alternatifs dans leur portefeuille en vue de couvrir leurs engagements, entre autres, contre le risque d'inflation. Nous utilisons le *Vector Error Correction Model* car il permet d'exploiter tant les dynamiques de court-terme que de long-terme contenues dans les données. Nos résultats suggèrent que l'ajout d'actifs alternatifs tels que les matières premières ou encore l'immobilier protège les fonds de pension contre les risques d'inflation tout en permettant un rendement amélioré pour un niveau de risque fortement maîtrisé.

ORDER-FLOW VARIABILITY: IMPLICATIONS FOR THE TRADING ENVIRONMENT

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This paper investigates the association between 15-minute order-flow variability and the adverse selection cost of trading, risk-adjusted stock returns, and trading volume. We find that order-flow variability is contemporaneously and positively associated with trading volume, S&P 500 futures open interest, and dispersion in analysts' earnings forecasts. Our analysis also suggests that periods of high order-flow variability for a stock are likely to be followed by periods of lower returns, lower spreads, and higher volume. Our findings suggest that order-flow variability captures differences in opinions. We also find strong evidence for the co-movement in order-flow variability as well as in the adverse selection cost of trading and inventory carrying costs. Co-movement in order-flow variability appears to partially explain co-movement in liquidity and in both the adverse selection and inventory costs.

OPTIMAL HEDGING IN DISCRETE AND CONTINUOUS TIME

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In this talk we give the optimal solution of the hedging problem in discrete time by minimizing the mean square hedging error, when the underlying assets are multidimensional. We find explicit expressions for the optimal hedging problem in continuous time when the underlying assets are modeled by a regime-switching geometric Lévy process. We show that the continuous solution can be approximated by discrete time Hidden Markov models processes.

HOW TO CHOOSE A MULTIVARIATE GARCH MODEL? A MODEL CONFIDENCE SET APPROACH

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This paper addresses the selection of multivariate GARCH models in terms of forecasting accuracy with a focus on large scale problems. A priori, it is difficult, if not impossible, to identify which model has the best out-of-sample forecasting performance. Therefore, we suggest proceeding in two steps. The first step is to estimate a variety of models and produce out-of-sample forecasts. This can be easily done by using standard econometric software packages which are today readily available to the forecaster. The second step is to identify a set of models that show superior forecasting performance. These models can then be used either to produce combined forecasts or to select a particular preferred model.

ASSET PRICING IN THE PRESENCE OF BACKGROUND RISK

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We assume an economy in which an agent faces, in addition to uncertainty about the return on risky asset holdings, an independent non-hedgeable zero-mean background risk. Within this framework, the pricing kernel is a function of aggregate consumption per capita and the size of the background risk. The introduction of the independent non-hedgeable background risk in the otherwise standard consumption CAPM enables to break the link between the utility curvature parameter, relative risk aversion to the financial investment risk, and the elasticity of intertemporal substitution. The proposed model does well in explaining the observed equity premia and risk-free rate.

TARIFICATION D'OPTIONS SOUS GARCH PAR DES MÉTHODES SPECTRALES D'APPROXIMATION EN PROGRAMMATION DYNAMIQUE

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Dans ce papier, nous proposons un algorithme numérique pour des fins de tarification d'options dans le contexte GARCH. La procédure est basée sur la programmation dynamique couplée avec une approximation spectrale utilisant des polynômes de Tchebychev. Elle peut être utilisée pour n'importe quel processus GARCH et plusieurs produits dérivés financiers. La méthodologie proposée est testée numériquement et est comparée à d'autres méthodes d'approximation en programmation dynamique. La méthode permet une convergence exponentielle du prix de l'option, obtenant une très bonne précision un temps de calcul minime.

CAN WE REALLY "CLONE" HEDGE FUND RETURNS? FURTHER EVIDENCE

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We examine the possibility of creating hedge funds "clones" using liquid exchange traded instruments. Specifically, we analyze the performance of fixed weight and Kalman filter generated clone portfolios for fourteen hedge fund strategies from February 2004 to September 2009. For eleven strategies out of fourteen, we find that our Kalman clones outperform their corresponding indices and that for nine strategies out fourteen, our fixed weight clones outperform their corresponding indices. Thus, for certain strategies, the possibility of cloning hedge fund returns is indeed real. Results should be considered with caution. While our Kalman filter approach does seem to decrease the tracking error of the clone portfolios when compared to the fixed weight clone portfolios, we find that index clones are by construction more highly correlated to various asset classes than their actively managed counterparts. We also find that the rolling correlation between index and clone portfolios may be quite volatile over time. Our empirical findings suggest that the most important benefits of clones is to serve as benchmarks and to help investors to better understand the various risk factors that impact hedge fund returns.

APPLICATION DU CALCUL DE MALLIAVIN EN OPTIMISATION DE PORTEFEUILLE

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La conférence portera sur l'applicabilité d'une solution pour le problème d'optimisation de portefeuille dans un marché continu. La solution est une application du calcul de Malliavin et permet de déterminer le portefeuille qui maximise l'espérance de l'utilité de l'investisseur. Notre étude porte sur un modèle de marché contenant une action, dont le modèle est basé sur la loi hyperbolique, un taux d'intérêt stochastique et un zéro-coupon. Nous verrons entre autres que la modélisation de la prime de risque peu générer des problèmes de variance lors de l'application numérique de la solution et nous proposerons une alternative à ce modèle.

MODÈLES LINÉARISÉS DE NELSON-SIEGEL (1987) ET SVENSSON (1994) POUR L'ESTIMATION DE STRUCTURES À TERMES DE TAUX

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Des versions linéarisées des modèles de Nelson-Siegel (1987) et Svensson (1994) pour l'estimation de courbe de rendements à échéance d'obligation zéro-coupon sont développées et analysées. Il est montré comment ces modèles peuvent être linéarisés pour les paramètres de niveau, pente et courbure et comment de l'information à priori peut être incorporé dans la procédure d'estimation. La performance des modèles linéarisés, relativement à leurs versions originales, sont examinées à l'aide de simulation de Monte-Carlo. Les résultats montrent que certaines versions des modèles linéarisés se comparent avantageusement aux modèles originaux en termes de précisions et de temps de calcul.

AN ANALYSIS OF GOVERNMENT LOAN GUARANTEES AND DIRECT INVESTMENT THROUGH PUBLIC-PRIVATE PARTNERSHIPS

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This paper compares two forms of government support: loan guarantee and direct investment through public-private partnerships (PPPs). With loan guarantee, government provides financial guarantees to enhance project creditworthiness. With direct investment, government invests capital in return for shares in the project. We find that loan guarantees are more effective in reducing project borrowing costs. In an informationally asymmetric environment, where the government knows less about project quality than do private partners, in other words the so-called plum problem rather than the familiar lemon problem, the project sponsors should seek a loan guarantee from the government, unless they are willing to give up control over the project. We show how the portion of shares given to the government can be a bargaining tool and can mitigate information asymmetry when structuring PPPs.

DYNAMIC CORRELATION OR TAIL DEPENDENCE HEDGING FOR PORTFOLIO SELECTION

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We solve for the optimal portfolio allocation in a setting where both conditional correlation and the clustering of extreme events are considered. We demonstrate that there is a substantial welfare loss in disregarding tail dependence, even when dynamic conditional correlation has been accounted for, and vice versa. Both effects have distinct portfolio implications and cannot substitute each other. We also isolate the hedging demands due to macroeconomic and market conditions that command important economic gains. Our results are robust to the sample period, the choice of the dependence structure, and both varying levels of average correlation and tail dependence coefficients.

MULTIVARIATE OPTION PRICING WITH TIME VARYING VOLATILITY MODELS

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In recent years multivariate models for asset returns have received much attention, in particular this is the case for models with multivariate time varying volatility. In this paper we consider models of this class and examine their potential when it comes to option pricing. Specifically, we derive the risk neutral dynamics for a general class of models with multivariate volatility, and we provide a feasible way to price options in this framework which can be used irrespective of the assumed underlying distribution. We show that our framework nests several interesting special cases. We provide an application to options on the maximum of the NASDAQ and NYSE indexes. Our results show that not only is correlation important for these options but so is allowing this correlation to be dynamic. Moreover, we show that for the general model exposure to the correlation carries an important premia, and when this is neglected option prices are estimated with errors. Finally, we show that when neglecting the non-Gaussian properties of the data, option prices are also estimated with large errors.

MARKET EFFICIENCY AND THE RISKS AND RETURNS OF DYNAMIC TRADING STRATEGIES WITH COMMODITY FUTURES

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This paper investigates dynamic trading strategies, based on structural components of returns, including risk premia, convenience yields, and net hedging pressures for commodity futures. Significant momentum profits are identified in both outright futures and spread trading strategies when the spot premium and the term premium are used to form winner and loser portfolios. Profits from active strategies based on winner and loser portfolios are partly conditioned on term structure and net hedging pressure effects. High returns from a popular momentum trading strategy based on a ranking period of 12 months and a holding period of one month dissipate after accounting for hedging pressure effects, consistent with the rational markets model.

INSTITUTIONAL HERDING AND INFORMATION CASCADES: EVIDENCE FROM DAILY TRADES

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Using daily trade and quote data, we test whether institutional trading patterns areconsistent with Avery and Zemsky's (1998) theoretical model of information cascades. Consistent with theory, we find variables proxying for information asymmetry to positively predict increased levels of institutional herding at high frequencies and that herding levels increase when estimated over shorter horizons. Days with high levels of herding are subsequently followed by price reversals but these are limited to those stocks where trading is believed to be informative. The paper also shows that the daily trade and quote data provides similar estimates of herding as previously estimated from quarterly holdings data.

MONTE CARLO METHODS FOR NONLINEAR PDES

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SIMULATION TECHNIQUES FOR QUADRATIC HEDGING WITH TRANSACTION COSTS

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This presentation focuses on the computation of solutions to a general hedging problem, viewed as a discrete time stochastic dynamic program. Even in a quadratic risk framework, computing optimal hedging policies can be challenging, especially in the presence of transaction costs. We present some solution methods based on the stochastic mesh method of Broadie and Glasserman and consider some practical examples involving equity derivatives.

SKEWNESS FROM HIGH-FREQUENCY DATA PREDICTS THE CROSS-SECTION OF STOCK RETURNS

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Theoretical and empirical studies document a negative relation between stock returns and individual skewness. In these studies, individual skewness has been defined with predictive models, industry groups and even with options' skewness. However, measures of skewness computed only from stock returns, such as historical skewness, do not confirm this negative relation. We propose a model-free measure of individual skewness directly obtained from high-frequency intraday prices, which we call realized skewness. We test whether realized skewness predicts future stock returns by sorting stocks every week according to realized skewness, forming five portfolios and analyzing subsequent weekly returns. We find a negative relation between realized skewness and stock returns in the cross section. A trading strategy that buys stocks in the lowest realized skewness quintile and sells stocks in the highest realized skewness quintile generates an average raw return of 38 basis points per week with a t-statistic of 9.15. This result is robust to different market periods, portfolio weightings, firm characteristics proxies and is not explained by the Fama-French-Carhart factors.

THE METHOD OF SIMULATED QUANTILES

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We introduce an inference method based on quantiles matching, which is useful for situations where the density function does not have a closed form --but it is simple to simulate-- and/or moments do not exist. Functions of theoretical quantiles, which depend on the parameters of the assumed probability law, are matched with sample quantiles, which depend on observations. Since the theoretical quantiles may not be available analytically, the optimization is based on simulations. We illustrate the method with the estimation of alpha-stable distributions. A thorough Monte Carlo study and an illustration to 22 financial indices show the usefulness of the method.

MEAN-VARIANCE PORTFOLIO MANAGEMENT IN A MARKET WITH STOCHASTIC CORRELATIONS

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Nous considérons un problème d'optimisation de type moyenne-variance dans un contexte où la dynamique des corrélations entre les prix des titres risqués est modélisée par un processus de Wishart. Nous obtenons une stratégie optimale par le biais de solutions d'équations différentielles stochastiques rétrogrades (*backward stochastic differential equations*). Nous verrons de plus que le problème d'optimisation se réduit à la résolution d'équations différentielles ordinaires matricielles de type Riccati.

MEAN-VARIANCE OPTIMAL PORTFOLIO WITH EXTENDED CIR INTEREST RATES

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We study a mean-variance optimal investment problem in a continuous-time framework where the interest rates follow an extended CIR process. We construct an optimal portfolio through solutions of backward stochastic differential equations. We also give sufficient conditions under which an explicit analytical expression is available for the optimal wealth of the investor.