



ENERGY AND COMMODITY FINANCE RESEARCH CENTER



2015-2016 ACTIVITY REPORT

The pioneering spirit





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Energy and commodity finance

Research center



Launched in January 2015, the Energy and Commodity Finance (ECOMFIN) Research Center aims at pursuing and disseminating academic research work and offer educational opportunities in the field of commodities and energy markets. In broad sense, this is an area of academic interest gathering financial related issues coming at the intersection of economic theory, management science, applied mathematics and probability, law and regulation, as well as operations research. This document is the first bi-annual report on the activities pursued by the center in the period 2015-2016.

Founding Members are **Andrea Roncoroni** and **Francis Declerck**, followed by **Sofia Ramos** and more recently **Roméo Tedongap**. PhD students: **Lionel Lecesne** (U. Cergy) and **Giovanni Pagliardi** (ESSEC). Assistant: **Mélanie Teillet** (**Esther Bonville** since 2017).

I. Research Production

Books

DECLERCK, F.

Agricultural and Soft Markets in Handbook of Multi-Commodity Markets and Products, Wiley Finance.

RONCORONI, A.

(with Fusai, G., Cummins, M., Fusai, G., Cummins, M.) Handbook of Multi-Commodity Markets and Products: Structuring, Trading and Risk Management. Wiley & Sons, London.

A desktop reference for traders, structurers, and risk managers who wish to broaden their knowledge base. This non-technical yet sophisticated manual covers everything the professional needs to become acquainted with the structure, function, rules, and practices across a wide spectrum of commodity markets. Gradual deregulation and the resulting increase in diversity and activity have driven the evolution of the traditionally segmented market toward integration, raising important questions about opportunity identification and analysis in multi-commodity deals. This book helps professionals navigate the shift, providing in-depth information and practical advice. As one of the only markets strong enough to boom during the credit crunch, the commodities markets are growing rapidly. Combined with increasing convergence, this transition presents potentially valuable opportunities for the development of a robust multi-commodity portfolio.

Journals articles

DECLERCK, F.

[Mergers & Acquisitions in the Food Business: How did the 2002 and 2009 Economic Crises Impact Corporate Valuation?](#)

International Journal on Food System Dynamics, June 2016, Vol. 7, No. 3, 183-195.

The paper assesses the ability of French wineries to prevail over the crisis of French wine in the years 2000. Corporations are distinguished from co-operatives. Over the 2000-2006 period in spite of sales fluctuations, French wineries did not increase their financial debt level substantially. Such result supports the traditional static trade-off theory (TOT). Co-operatives were able to absorb part of the impact of the wine crisis at the expense of their members, in increasing account payables to member. Corporations have not increased trade account payables to vine growers.

In the mid-2000s, the French wine crisis has not been strong enough to shake the financial structure of co-operatives and corporations. But co-operatives look more affected. However, sales of French wines dropped a lot more in 2009 and financial data are not yet available to observe the consequences.

DECLERCK, F.

[Financial Instruments and Conflicts of Interest: Application to French Agricultural Co-operatives.](#)
International Journal on Food System Dynamics 2015, Vol. 6, No. 4, 212-224.

To finance their growth and value creation, agricultural co-operatives may use several financial instruments: equity, quasi-equity or debt. Many of these instruments are particularly innovative and have been designed specifically for co-operatives. In France, only recently have some co-operatives expanded their types of financing to include external funders through the issue of OTC- or publicly-traded securities. Agricultural co-operatives' governance and economic projects are often misunderstood by external financial investors. The risk of conflicts of interest plays a role in these misunderstandings in the way retained earnings, returns to agricultural products brought by co-op member and returns to equity capital. Such risks are identified and answers are proposed.

DECLERCK, F.

[Do Agricultural Commodity Firm Stock Price and Agricultural Commodity Price Move Together?](#)
International Journal on Food System Dynamics, 5(3): 120-129, 2014.

The research aims at explaining stock performance of processing companies in function of commodity performance on commodity markets. The results show that stock prices of food companies do not significantly depend on agricultural market prices. So, risks of agricultural market price volatility cannot be hedged using food firm stocks, whose markets are more liquid.

RAMOS, S.

(Dias, J.G., Vermunt, J.K., Ramos, S.)

[Clustering Financial Time Series: New insights from an extended hidden Markov model.](#)
European Journal of Operational Research, 2015, 243 (3), 852-864

In recent years, large amounts of financial data have become available for analysis. We propose exploring returns from 21 European stock markets by mo-



del-based clustering of regime switching models. These econometric models identify clusters of time series with similar dynamic patterns and moreover allow relaxing assumptions of existing approaches, such as the assumption of conditional Gaussian returns. The proposed model handles simultaneously the heterogeneity across stock markets and over time, i.e., time-constant and time-varying discrete latent variables capture unobserved heterogeneity between and within stock markets, respectively. The results show a clear distinction between two groups of stock markets, each one characterized by different regime switching dynamics that correspond to different expected return-risk patterns. We identify three regimes: the so-called bull and bear regimes, as well as a stable regime with returns close to 0, which turns out to be the most frequently occurring regime. This is consistent with stylized facts in financial econometric.

RAMOS, S.

(Dias, J.G., and Ramos, Sofia B.)

[An Analysis of Industry Regimes Synchronization in the Eurozone.](#)

Journal of Common Market Studies, 2015, 35 (2), 255-273

Geographical versus industrial diversification has been the subject of much debate in equity investment strategies. This article revisits this issue and analyzes the contention that if national factors have lost importance since the launch of the euro, then the regime dynamics of industry indexes in the eurozone countries should be more similar. Results show a core group of country-industry indexes sharing the same regime dynamics, which comprise the majority of industry indexes of France and Germany. After the euro launch, a group of industry indexes gained more similarities with the core group of the eurozone - notably industries from Italy, Spain and Finland. Nevertheless, dynamics in a small group of industries did not change. Overall, synchronization between country-industry indexes has increased except for a small group of industries.

RAMOS, S.

(Diptes Bhimjee, Dias, J.G., Ramos, Sofia B.)

[Banking Industry Performance in the Wake of the Global Financial Crisis.](#)

International Review of Financial Analysis, volume 48, December 2016, Pages 376-387

This paper analyzes the performance of the banking industry both prior to and during the global financial crisis (GFC). Through the application of a panel regime-switching model designed to capture heterogeneity, our findings suggest that global banking performance can be grouped into two distinctive clusters, each with its own specific regime dynamics. Before the crisis, a cluster of banking institutions pertaining to advanced economies stood out for its buoyant

stock market performance, whereas a second cluster, mainly composed of banking indexes that belong to emerging economies, exhibited a more subdued performance. Further, this differentiation was accompanied by low regime synchronization between the clusters. During the crisis, banking institutions behaved similarly, regime synchronization increased, and the differences in the regime dynamics vanished. Finally, the GFC constituted a highly synchronized and systemic extreme financial event, as evidenced by our findings depicting the onset of severe underlying international financial contagion processes.

RAMOS, S.

(Martín-Barragán, Belén, Sofia B Ramos, Helena Veiga)

[Correlations between Oil and stock Markets: A wavelet-based approach.](#)

Economic Modelling, 2015, Volume 50, November 2015, Pages 212-227

In a global economy, shocks occurring in one market can spill over to other markets. This paper investigates the impact of oil shocks and stock market crashes on correlations between stock and oil markets. We test changes in correlations for different time scales with non-overlapping confidence intervals based on estimated wavelet correlations. Our results indicate that correlation between oil and stock markets tends to be stable in non-shock periods, around zero, but this changes during oil and financial shocks both at higher and lower frequencies. We find evidence of contagion, in particular during the 2008 and 2011 stock market falls. At low frequencies, the number of correlation breakdowns during oil shocks and stock market crashes is higher and they can be interpreted as shifts in market co-movements.

RONCORONI, A.

(Id Brik, R., Roncoroni, A.)

[Static Mitigation of Volumetric Risk.](#)

The Journal of Energy Markets. The Journal of Energy Markets, volume 9, June 2016, Pages 111-150

Power companies hold positions showing joint risk to tradable electricity prices and idiosyncratic load figures. We design two structured derivatives written on the price of electrical power and on a side index exhibiting correlation to the customer load, respectively. They are optimal in the sense of maximizing a risk-adjusted performance measure. We compute closed-form formulae for these securities in the case of specified distributional assumptions. Empirical tests have been conducted on the French power market showing the relative quality of the hedging proposal with respect to the a custom hedge written on price only under assumption of a mild or extreme season.

RONCORONI, A.

(Roncoroni, A., Id. Brik)

Hedging Size Risk: Theory and Application to the US Gas Market.*Energy Economics* 64, 2017, 415-437

Many corporate commitments exhibit a combined financial exposure to both market prices and idiosyncratic size components (e.g., volume, load, or business turnover). We design a customized contract to optimally mitigate the risk of joint fluctuations in price and size terms. The hedge is sought out among contingent claims written on price and any quoted index that is statistically dependent on commitment size. Closed-form solutions are derived for the optimal custom hedge pay-off and for the asset holdings of two market strategies, one based on price-linked forwards, the other based on price-linked and index-linked forwards. Analytical hedges are obtained using a stylized lognormal market model. Detailed comparative statics provide a thorough analysis of optimal hedging pay-off functions. Performance assessment is conducted in the context of the US gas market and a prototypical urban region. Results suggest that hedging through suitable custom claims written on price and an additional index significantly outperforms standard price-based as well as mixed price-index forward hedging alternatives. Our optimal custom hedge could be adopted as a benchmark for the relative assessment of any risk management solution.

TÉDONGAP, R.

(Dahlquist, M., Farago, A., & Tédongap, R.)

Asymmetries and Portfolio Choice.*Review of Financial Studies* 2016; 30(2), 667-702.

We examine the portfolio choice of an investor with generalized disappointment-aversion preferences who faces log returns described by a normal-exponential model. We derive a three-fund separation strategy: the investor allocates wealth to a risk-free asset, a standard mean-variance efficient fund, and an additional fund reflecting return asymmetries. The optimal portfolio is characterized by the investor's endogenous effective risk aversion and implicit asymmetry aversion. In empirical applications, we find that disappointment aversion is associated with much larger asymmetry aversion than are standard preferences. Our model explains patterns in popular portfolio advice across both risk appetites and investment horizons.

TÉDONGAP, R.

(Augustin, P., & Tédongap, R.)

Real Economic Shocks and Sovereign Credit Risk.*Journal of Financial and Quantitative Analysis* 2016, 51(2), 541-587.

We provide new empirical evidence that U.S. expected growth and consumption volatility are closely related to the strong comovement in sovereign spreads.

We rationalize these findings in an equilibrium model with recursive utility for credit default swap (CDS) spreads. The framework links a reduced-form default process with country-specific sensitivity to expected growth and macroeconomic uncertainty. Exploiting the high-frequency information in the CDS term structure across 38 countries, we estimate the model and find parameters consistent with preference for early resolution of uncertainty. Our results confirm the existence of time-varying risk premia in sovereign spreads as compensation for exposure to common U.S. macroeconomic risk.

TÉDONGAP, R.

(Feunou, B., Jahan-Parvar, M. R., & Tédongap, R.)

Which Parametric Model for Conditional Skewness?*The European Journal of Finance* 2016, 22(13), 1237-1271.

Abstract

This paper addresses an existing gap in the developing literature on conditional skewness. We develop a simple procedure to evaluate parametric conditional skewness models. This procedure is based on regressing the realized skewness measures on model-implied conditional skewness values. We find that an asymmetric generalized autoregressive conditional heteroscedasticity specification on shape parameters with a skewed generalized error distribution provides the best in-sample fit for the data, as well as reasonable predictions of the realized skewness measure. Our empirical findings imply significant asymmetry with respect to positive and negative news in both conditional asymmetry and kurtosis processes.

TÉDONGAP, R.

(Bonomo, M., Garcia, R., Meddahi, N. & Tédongap, R.)

The Long and the Short of the Risk-Return Tradeoff.*Journal of Econometrics* 2015, 187(2), 580-592

The relationship between conditional volatility and expected stock market returns, the so-called risk-return trade-off, has been studied at high- and low-frequency. We propose an asset pricing model with generalized disappointment aversion preferences and short- and long-run volatility risks that captures several stylized facts associated with the risk-return trade-off at short and long horizons. Writing the model in Bonomo et al. (2011) at the daily frequency, we aim at reproducing the moments of the variance premium and realized volatility, the long-run predictability of cumulative returns by the past cumulative variance, the short-run predictability of returns by the variance premium, as well as the daily autocorrelation patterns at many lags of the VIX and of the variance premium, and the daily cross-correlations of these two measures with leads and lags of daily returns. By keeping the same calibration as in this previous paper, we ensure that the model is capturing the first and second moments of the equity premium and the risk-free rate, and the



predictability of returns by the dividend yield. Overall adding generalized disappointment aversion to the Kreps-Porteus specification improves the fit for both the short-run and the long-run risk-return trade-offs.

TÉDONGAP, R.

[Consumption Volatility and the Cross-section of Stock Returns.](#)

Review of Finance 2015, 19(1), 367-405

I derive and test multi-horizon implications of a consumption-based equilibrium model featuring fluctuating expected growth and volatility. My setup allows consumption dynamics to be estimated jointly with covariance risk prices in a single-stage generalized method of moment, and then inferences from asset pricing tests reflect uncertainty coming from factor estimation. I show that changes in consumption volatility are the key driver for explaining major asset pricing anomalies across risk horizons, while other factors play no or a secondary role. Value stocks and past long-term losers pay higher average returns mainly because they covary more negatively with these changes than what other stocks do.

Other Publications

DECLERCK, FRANCIS

[La compétitivité des filières agroalimentaires.](#)

ThinkTank agroalimentaire Les Echos, Paris, 28 June 2016.

DECLERCK, FRANCIS

[«Quels chantiers pour restaurer la compétitivité de la filière alimentaire française?».](#)

ThinkTank agroalimentaire Les Echos, Paris, 3 July 2015.

DECLERCK, FRANCIS

[Le statut coopératif offre beaucoup de souplesse.](#)

Réussir Grandes Cultures, 296 :8, Novembre 2015.

DECLERCK, FRANCIS

Declerck, F. & A. Buidine,

[«Numericable-SFR Convergence fixe-mobile pour maîtriser l'accès internet»,.](#)

Étude de cas en fusions-acquisitions / M&A corporate finance case study (29 pages, notes pédagogiques / pedagogical notes (44 pages), Centrale de cas et de médias pédagogiques de la CCI Paris Ile-de-France, 2016.

Other Academic activities

Editorial Board Membership

RAMOS, SOFIA

Academic journals:

Associate Editor, The European Journal of Finance;

RONCORONI, ANDREA

Academic journals:

Associate Editor, Journal of Commodity Markets, Elsevier Associate Editor, Journal of Energy Markets, Risk Publ.'s Associate Editor: Applied Mathematical Finance, Routledge

Guest Co-Editor: Journal of Banking and Finance Special Issue «Commodity and Energy Markets».

Guest Co-Editor: Journal of Energy Markets. Special Issue «Energy Finance»

Professional journals:

Co-Editor, Argo Review (2014-2016);

Advisory Board Member, Global Commodity Applied Research Digest, JPMCC, University of Colorado Denver Business School.

Peer-Reviewing Role

DECLERCK, FRANCIS

Journal of Banking and Finance

Agribusiness: An International Journal

International Journal on Food System Dynamics

RAMOS, SOFIA

Energy Economics

Energy Journal

Journal Banking & Finance

Journal of Empirical Finance

Quarterly Review of Economic and Finance

Revue Finance

Financial Innovation

RONCORONI, ANDREA

Review of Financial Studies

Management Science

Mathematical Finance

Journal of Banking and Finance

Journal of Business and Economic Statistics

Energy Economics

Journal of Forecasting

Review of Finance

TÉDONGAP, ROMÉO

Review of Financial Studies

Journal of Finance

Journal of Econometrics

Energy Economics

Research Association Membership

Labex

RONCORONI, ANDREA has been acting as Associate Researcher of Labex MME-DII for the areas of Energy Finance, Commodity Markets, Corporate Financial Risk Management, Derivative Structuring, Asset Pricing.

PhD Supervision

LECESNE, LIONEL

PhD candidate, University of Paris-Seine (Cergy campus) - Supervisor: Andrea Roncoroni

PAGLIARDI, GIOVANNI

PhD candidate, ESSEC Business School.
Co-supervisor: Andrea Roncoroni.

Examination of Doctoral thesis

DECLERCK, FRANCIS

Examiner of the Doctoral thesis:
Houévi Nadia Kpondjo, "Modélisation de la compétitivité industrielle" Université Paris Ouest - IFP Energies Nouvelles, Nanterre, 1^{er} décembre 2016.

TÉDONGAP, ROMÉO

Faculty opponent- EDHEC Business School Faculty opponent- Université de Montpellier.

The Energy and Commodity Finance Research Center (Synopsis)

Monthly Webinar

Commodity Market Analyses, Cutting-Edge Quant Methods and Financial Instruments (Sponsored by Labex MME-DII).

<http://energy-commodity-finance.essec.edu/events/>

Research Team and Contributors

Teaming Influential Researchers Drawing Theories and Performing Analyses at the Farthest Frontiers of Financial Knowledge.

<http://energy-commodity-finance.essec.edu/research/scientific-commitee/>

ECOMFIN Conference 2016

A Yearly Conference Representing the Worldwide Benchmark Academic Meeting in the Area of Energy and Commodity Markets.

<http://ecomfin2016.essec.edu/>

Commodity & Energy Markets Association (CEMA)

Actively Promoting Pure and Applied Research in All Fields Concerned with Markets for Commodities and Energy Sources.

<https://cem-a.org/>

Professional Research

Global Commodities Applied Research Digest

A Joint Collaboration with the University of Colorado Denver Business School (US) for Informing the Commodity Industry on Innovative Research Work.

<http://energy-commodity-finance.essec.edu/research/>

Argo Review

Keeping up with Ultimate Tools and Market Practice for Trading, Risk Analysis, and Exposure Management.

<http://energy-commodity-finance.essec.edu/research/argo-review>

PHD Education - LABEX PhD Course

Joining Graduate Studies on Modeling, Pricing and Risk Management Oil, Gas, and Soft Commodity Portfolios and Physical Assets.

<http://energy-commodity-finance.essec.edu/research/>

MS Management ECOMFIN Track

Mastering Energy, Metal and Soft Commodity Markets, Financial Economics, and Structured Financial Securities.

<http://energy-commodity-finance.essec.edu/education/>

International Summer School (ISS) on Risk Measurement and Control

A Graduate Training School in Financial Risk Management, Energy Risk Management, and EURO Project Cutting-Edge Analysis.

<http://www.risksummerschool.eu/>



II. Research Dissemination

Webinar Series

The ECOMFIN Research center organizes monthly Webinars that focus on Commodity Market Analyses, Cutting-Edge Quant Methods and Financial Instruments. They are sponsored by Labex MME-DII research fund, hosting academics and, to a minor extent, selected practitioners, putting forward new findings on market microstructure and skilled views about market evolution.

The Webinars are webcasted on-live and are available on the ECOMFIN website via YouTube.



<http://energy-commodity-finance.essec.edu/events/>

Organizers: Andrea Roncoroni, Francis Declerck

Juri Hinz, University of Technology Sydney

Optimal Control in Energy Finance

Wei Xiong, Princeton University

Information Frictions in the Global Energy Markets

Nicola Secomandi, Carnegie Mellon University

Merchant Operations of Energy Trading Networks

Elisa Scarpa, Edison Trading

Big Fish: Oil Markets and Speculation

Marcel Prokopczuk, Leibniz University Hannover

The Determinants of Convenience Yields

Frederic Lantz and Jean-Pierre Indjehagian,

IFP-Energies Nouvelles and ESSEC

Oil Prices and Volatility: Econometric Research and Results

Joelle Miffre, EDHEC

The Pricing of Skewness in Commodity Futures Markets: Risk or Lottery

Benoit Boisieux, Louis-Dreyfus Commodities

Global Sugar Market: Fundamental Perspectives

Helyette Geman, Birkbeck, University of London &

Johns Hopkins University.

The New Outlook of Energy Markets and Joint Dynamics of Coal, Natural Gas and Crude Oil

Ruediger Kiesel, University of Duisburg-Essen

An Empirical Analysis of Intraday Trading of Electricity

Sjur Westgaard, Norwegian University of Science

and Technology

Analysis and Forecasting of Electricity Price Risks

with Quantile Factor Model

Rafal Weron, Wrocław University of Technology

Ehud Ronn, University of Texas at Austin

Using Equity, Index and Commodity Options to Obtain

Forward-looking Betas and Conditional-capm

Expected Crude-oil Spot Prices

Ehud Ronn, University of Texas at Austin

Using Equity, Index and Commodity Options to Obtain.

Forward-looking Betas and Conditional-capm.

Expected Crude-oil Spot Prices.

Alvaro Cartea, University College London

Risk Premia in Commodity Markets

Ferdinando Ametrano, Banca IMI

Bitcoin: The Cryptocurrency Frontier in Commodity

Monetary Standard.

Eric Aboussouan, Cargill

Maritime Freight of Energy, Metals and Agricultures.

Ronald Huisman, ERASMUS University

The Price of Electricity and its Fundamentals.

Hilary Till, University of Colorado

Structural Positions in Oil Futures Contracts:

What Are the Useful Indicators?

Conferences

Energy and Commodity Finance Conference 2016

(June 23-24, 2016 at ESSEC Business School).

Chair: Andrea Roncoroni

Organizing Committee:

Sofia Ramos, Francis Declerck, Giovanni Pagliardi,

Álvaro Cartea (Oxford University) and Rüdiger Kiesel

(University Duisburg-Essen).

ESSEC team: Guillaume Chevillon, Estefania San-

tacreu-Vasut, and Cristina Terra from the Economics

Department; Andras Fulop and Peng Xu from the Fi-

nance Department.



<http://ecomfin2016.essec.edu/>

Keynote speakers: Wei Xiong (Princeton University)

and Nicola Secomandi (Carnegie Mellon University).

Round Table: The Financialization of Energy and

Commodity Markets gathered academic and profes-

sional experts discussing major aspects about the

current global environment. Invited practitioners from

EDF, GDF, EON Global Commodities, ENI, Paul Has-

tating, Trafigura, Glencore, Gunvor, Cheniere, BP, Socié-

té Générale, and other major players presented their

views on the standing market evolution.

Paris Workshop - AFFI Conference 2015

(June 2015 at ESSEC Business School).

Chair: Jérôme Detemple, Boston University.

Energy Finance Keynote: Ehud Ronn, University of Texas at Austin.

Commodity Finance .Keynote: Alvaro Cartea, Oxford University.



<http://energy-commodity-finance.essec.edu/events/>

Special Issues

Journal of Banking & Finance: Special Issue on “Commodity and Energy Markets” published by the Journal of Banking and Finance. Guest editors are: Marcel Prokopczuk (Leibniz University Hannover), Andrea Roncoroni (ESSEC Business School, Paris - Singapore), Ehud Ronn (University of Texas at Austin).



<http://energy-commodity-finance.essec.edu/research/>

Network

The **Commodity and Energy Markets Association (CEMA)** is the official organization for researchers who have a keen interest in commodity and energy markets and aims to stimulate research, discussions, and the dissemination of expertise and know-how in this fascinating, important, and fast growing area of research. The Association has been legally founded on December 16, 2015 in Paris, under the endorsement of Oxford University, University of Duisburg-Essen (legal office), University Paris Dauphine, University of St. Gallen, Wroclaw University of Technology, University of Sussex, and ESSEC.

Executive Committee: Álvaro Cartea (Deputy Chairman), University of Oxford; Sebastian Jaimungal, University of Toronto; Rüdiger Kiesel, University of Duisburg-Essen; Marcel Prokopczuk (Treasurer), Leibniz Universität Hannover; Andrea Roncoroni (Chairman), ESSEC Business School Paris-Singapore; Nicola Secomandi, Carnegie Mellon University, Tepper School of Business.

Sponsor: Labex MME-DII

Collaborating institutions include: University of Texas at Austin, Norwegian University of Science and Technology, Bocconi University, Edhec Business School, Birkbeck University of London, Erasmus University of Rotterdam, Leibniz University Hannover, University of Oxford, Cass Business School, University of Technology Sydney, Università Svizzera Italiana, Institut Français du Pétrole – Energies Nouvelles, London School of Economics.



<https://cem-a.org/>

Conferences Presentations

DECLERCK, FRANCIS

(with Jean-Pierre Indjehagopian)

Oil and Oil Company Stock Prices: Cointegration with Changing Regimes.

Energy & Commodity Finance (ECOMFIN) Conference at ESSEC Business School, Cergy-France, 23-24 June 2016.

DECLERCK, FRANCIS

(Declerck Francis, Frédéric Lantz, Jean-Pierre Indjehagopian)

Dynamics and Structural Breaks Between the bio-fuel, Resources and Oil Prices on the European Market.

Energy & Commodity Finance (ECOMFIN) Conference at ESSEC Business School, Cergy-France, 23-24 June 2016.

DECLERCK, FRANCIS

(with René Mauget)

To “co-operativize” Farmer Suppliers of investor-owned Companies Acquired by Agricultural Co-operatives: Motivations, Processes and Implications.

International Co-operative Alliance Research Conference, Paris, May 27-30, 2015.

DECLERCK, FRANCIS

Financial Instruments and Conflicts of Interest: Application to the French Agricultural Co-operatives.

Proceedings in System Dynamics and Innovation in Food Networks of the 9th International European Forum on System Dynamics and Innovation Networks, International Center for Food Chain Network Research of the University of Bonn-Germany, Innsbruck-Igls, Austria, 9-13 February 2015.

RAMOS, SOFIA

(with Keswani, Aneel, Miguel, António F.)

Lazy Investors, Lazy Fund Managers, Lousy Performance: National Culture and Mutual Fund Management. IPAG, December 2016 & Bath University 2015



conference on Institutional and Individual Investors.

RAMOS, SOFIA

(with Helena Veiga and Chih-Wei Wang)

[Energy Industry's Market Value and Oil Price.](#)

10th Computational Financial Econometrics Seville, December 2016 & ECOM FIN2016.

RAMOS, SOFIA

(with Keswani, Aneel, Miguel, António F.)

[Mutual Fund Size versus Fees: When Big Boys Become Bad Boys.](#)

Financial Management Association October 2016.

RAMOS, SOFIA

(Gallan, J., S. Ramos and H. Veiga)

[An Analysis of the Dynamics of the Efficiency of Mutual Funds.](#)

EFMA 2015, Netherlands, June 2015 & 32nd International French Finance Association, June 2015.

RONCORONI, ANDREA

[Hedging Size Risk](#)

Seminar Series in OM/OR

(Carnegie Mellon University, Nov. 2016).

RONCORONI, ANDREA

[Optimal Hedge Design](#)

SIAM Conference in Financial Mathematics and Engineering (Austin, Nov. 2016).

RONCORONI, ANDREA

[Electricity Forward Curves with Thin Granularity](#)

International Symposium of Energy Finance (IPAG Paris, Apr. 2016).

RONCORONI, ANDREA

[The Fundamental Structure of Arbitrage Models for Commodity Prices](#)

Energy Finance 2015

(Cass Business School London, Sep. 2015).

RONCORONI, ANDREA

[How Firms Should Hedge Nontradable Risk](#)

International Ruhr Energy Conference

(Univ. Duisburg-Essen, Mar. 2015).

III. Education/training

The Energy and Commodity Finance (ECOMFIN) RESEARCH CENTER is a resource for ESSEC Business School. It designed and now managed an “Energy and Commodity Finance (ECOMFIN) track, part of the ESSEC Finance Track, CFA Program Partner. Students enrolled in the ESSEC MSc in Management (Grande École Program) and ESSEC Master of Finance may register for the ECOMFIN track.

The track goals are

- ▶ To develop a comprehensive and strategic view of energy and commodity market issues.
- ▶ To gain professional insight through case studies and practical examples.
- ▶ To give a focus on major energy finance concepts and contract structuring strategies.
- ▶ To develop hedging and proprietary trades in commodity markets.
- ▶ To assess and manage energy and commodity price risk exposure.

Program schedule is articulated along 4 Core Courses in addition to Principles of Finance, Ethics Seminar in Finance, and 3 Electives.

The Courses are:

EOA31205 Sustainable Energy Economics, managed by Professor Estefania Santacreu-Vasut at the Department of Economics.

The objective of the course is to introduce the students to the challenges and opportunities posed by the management of energy and its link to environmental issues. Combining energy economics with environmental economics, we study energy in terms of strategic, institutional and social aspects using the tools of economic theory.

FINM31213 Agri-Food Commodity Markets by Professor Francis Declerck at the Finance Department.

Prices fluctuate a lot, from 1 to 3, on international commodity (raw materials) markets. So, risks taken by commodity producers and manufacturers are very high.

The objectives are as follows:

- ▶ To understand price mechanisms of international commodity markets and how price mechanisms are affected by WTO commercial policies and agricultural policies (US Farm Bill, Common Agricultural Policy in the EU...);
- ▶ To know the principles, role and mechanisms of futures markets;
- ▶ To identify risks taken by economic agents;
- ▶ To be able to use financial tools (futures contracts and options) in order to mitigate risks of price volatility.

FING31115 Energy and Commodity Markets and Products, by Professor Andrea Roncoroni at the Finance Department

This course introduces the participant to the fast-growing financial markets of energy sources and commodities. We mainly focus on market description, position structuring, security trading, and risk management. A learning-by-doing approach is followed: we introduce topics through practical examples and then identify general rules. Our goal is to prepare to recruiting interviews for job positions in a large variety of areas concerned with energy and commodity markets.

FING31113 Energy and Commodity Models and Applications, now changed into Commodity Risk Management for Corporates, by Professor Andrea Roncoroni at the Finance Department.

This course offers the basic quantitative toolkit to analyze and model energy and commodity prices.

We introduce the participant with the construction and use of continuous and discrete time models of energy and commodity prices. Techniques are introduced and applied to real case studies. In addition, we provide with an overview of estimation and simulation methods. The design of the course focuses on conceptual understanding and practical use of the proposed tools. Our goal is to prepare to recruiting interviews for job positions in a large variety of areas concerned with energy and commodity markets.



<http://energy-commodity-finance.essec.edu/education/>

Coordination: Andrea Roncoroni and Francis Declerck

Track Assistant: Esther Bonville.



IV. Members



Andrea RONCORONI

Director

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Research Areas

Corporate Risk Management, Energy Finance, Commodity Price Modelling, Financial Derivatives.

Professor of Finance at ESSEC Business School (Paris-Singapore) and Visiting Fellow at Bocconi University (Milan). He serves as an Associate Editor for the Journal of Energy Markets, the Journal of Commodity Markets, and Applied Mathematical Finance; as a Co-Editor of Argo Review; and as a Guest Editor of the Special Issue on «Commodity and Energy Markets» of The Journal of Banking and Finance. Andrea holds PhD's in Applied Mathematics and in Finance. His research interests primarily cover energy and commodity finance, quantitative financial modeling, risk analysis, corporate financial risk management, derivative security design, and price econometric and simulation. Andrea published in academic journals (e.g., J. Business, J. Banking & Finance, J. Economic Dynamics & Control, J. Energy Markets, Energy Economics, and the European J. of Operational Research), professional reviews (e.g., Argo Rev.), and financial book series (e.g., Implementing Models in Quantitative Finance, Springer Finance, Handbook of Multi-Commodity Markets and Products, Wiley). He is chair organizer of the Energy and Commodity Finance Conference 2016 (Paris) and the Commodity and Energy Markets Annual Meeting 2017 (Oxford).

Courses

Financial Markets, Options, Energy and Commodity Markets, Commodity Risk Management for Corporates.



Francis DECLERCK

Co- Director

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Research Interests: Agri-soft commodity markets and renewable energy markets, corporate finance (performance, M&A) and application to food and agribusiness.

Associate Professor of Finance at ESSEC Business School (Paris-Singapore), Francis Declerck focuses his research on agri-soft commodity markets and finance applied to food and agribusiness. In 2016, he also trained market analysts and economists of the Directorate General Agriculture at the European Commission about the management of agricultural price volatility risks. On sabbatical period in 2016, he analyzed biodiesel market prices at Institut Français du Pétrole – Energies Nouvelles (IFP-EN) under the direction of Prof. Dr. Frédéric Lantz, Rueil-Malmaison, France, 2016.

Courses

Agricultural Commodity Markets/ Marchés à terme agricole, Corporate finance (Financial Management, Corporate Valuation, Mergers & Acquisitions) / Finance d'entreprise (gestion financière, évaluation d'entreprise, fusions et acquisitions).



Sofia RAMOS

Associate Researcher
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Research Areas: Portfolio Management, Energy Finance

Associate professor of finance at ESSEC Business School (Paris-Singapore). She is associate editor of the European Journal of Finance. She holds a Ph.D. in Finance from the Swiss Finance Institute - University of Lausanne. Her research interests are primary in the area of Mutual Funds, Portfolio Management, Energy Finance and International Finance. She has published her work on the Review of Finance, Journal of Banking and Finance, Journal of Empirical Finance, Journal of Financial Markets, Energy Economics, Economic Modeling among other journals and a financial book in energy finance: The Interrelationship Between Financial and Energy Markets. She has been co-chairing the organization of the Energy and Commodity Finance Conference 2016 (Paris) and the Commodity and Energy Markets Annual Meeting 2017 (Oxford).

Courses

Investments and Portfolio Analysis, International Finance.



Roméo TEDONGAP

Associate Researcher
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Research Areas: Financial Markets, Financial Modeling, Risk Management, Asset Allocation.

Associate Professor of Finance at ESSEC Business School (Paris-Singapore), Roméo Tédongap is an experienced academic expert in macro finance and financial econometrics. With more than ten years of experience in research, teaching, program management and thesis supervision, he is involved in several leading academic seminars and conferences in financial economics and risk management, and is associate editor of the Quarterly Journal of Finance and Accounting. Roméo has several publications in top-rated peer-reviewed scientific journals in finance, statistics and econometrics. He was the co-winner of the 2013 best paper award at the annual meetings of the European Financial Management Association (EFMA), and winner of the 2008 best Ph.D. thesis award in economics at the University of Montreal. He currently works on asymmetric investors' attitude towards risk in the presence of macroeconomic uncertainty and systemic changes, and their implications for asset pricing and portfolio choice. Besides, he has developed a strong interest for the attractiveness of African stock markets and their impact on economic growth and development.

Courses

Financial Markets, Marchés Financiers, Advanced Options, Asset Pricing I.

PhD students



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