

## Swissquote Conference 2013 on Commodities and Energy: Program

<u>Friday, 1st November</u>		Venue: Rolex Learning Center, EPFL
08:30-09:00	<i>Registration/welcome coffee</i>	
09:00-09:45	<b>Fred Espen Benth</b>	Stationarity and Risk Premia in Power Markets (Discussant: Eva Lütkebohmert)
09:45-10:30	<b>Jaime Casassus</b>	The Economic Impact of Oil on Industry Portfolios (Discussant: Anders Trolle)
10:30-11:00	<i>Coffee break</i>	
11:00-11:45	<b>Mahmoud Hamada</b>	Extracting Higher Value out of Real Assets
11:45-12:30	<b>Anna Pavlova</b>	A Model of Financialization of Commodities (Discussant: Olivier Scaillet)
12:30-14:00	<i>Lunch break</i>	
14:00-14:45	<b>Lutz Kilian</b>	How Large is the Speculative Component in the Price of Oil? (Discussant: Luisa Lambertini)
14:45-15:30	<b>Lars A. Lochstoer</b>	Limits to Arbitrage and Hedging: Evidence from Commodity Markets (Discussant: Paul Schneider)
15:30-16:00	<i>Aperitif</i>	

## **Abstracts (in alphabetic order of speakers)**

### **Fred Espen Benth, University of Oslo**

#### **Title: Stationarity and Risk Premia in Power Markets**

**Abstract:** Empirical and economical evidence argue for a risk premium in power markets that can change sign from positive to negative along the axis of maturities. At the same time, there are reasons for stationarity (or mean-reversion) in spot commodity prices at the same time as the long end of the forward market is stochastic. We present a class of pricing measures that can explain the risk premium as well as the theoretically contradicting fact that long-term behaviour of futures prices are not constant.

### **Jaime Casassus, Universidad Católica de Chile**

#### **Title: The Economic Impact of Oil on Industry Portfolios**

**Abstract:** We build an equilibrium model to disentangle industry-specific from business cycle effects of oil on stock returns. In our model oil is considered as an input factor for production and also as a macro variable. We estimate the model for 13 industries, including the oil industry. Our results suggest that the value of all non-oil industries decreases with an oil price shock. This result is explained by the effect of oil on the price-dividend ratios of the industries, in particular, by the significant negative effect of oil on their growth opportunities. The high persistence of the real oil price shocks makes these effects to be long-lived. The effect of oil on the current cash-flows is negative but small. This explains why the oil price shocks can produce such a significant effect on the US financial market despite the low US economy's oil intensity. The conditional expected portfolio returns decrease with the oil price because of the negative effect of oil on the market price of risk and interest rates. Moreover, industries with higher systematic risk have expected returns that are more affected by the oil price. We find that most of the systematic risk of the firms is explained by their output rather than by effect of oil on the cash-flows.

### **Mahmoud Hamada, Ernst & Young, Geneva**

#### **Title: Extracting Higher Value out of Real Assets**

**Abstract:** Real assets have always been a sought-after investment class in difficult economic times. Examples such as gas storage, power plant and pipeline capacity provide flexibility and optionality that energy companies are competing for. However, the opportunity of owning a real asset comes with the challenge of optimizing its value and minimizing its related risks. In this talk, we will discuss different quantitative approaches in deriving optimal value from some specific real assets. We will highlight valuation and hedging challenges and suggest ideas for future research.

## **Lutz Kilian, University of Michigan**

### **Title: How Large is the Speculative Component in the Price of Oil?**

**Abstract:** A popular view is that the surge in the real price of oil during 2003-08 cannot be explained by economic fundamentals, but was caused by the increased financialization of oil futures markets, which in turn allowed speculation to become a major determinant of the price of oil in physical markets. This interpretation has been driving policy efforts to tighten the regulation of oil derivatives markets. We show that the existing evidence is not supportive of an important role of speculation in driving the spot price of oil after 2003. There is strong evidence that the comovement between spot and futures prices reflects common economic fundamentals rather than the financialization of oil futures markets.

## **Lars A. Lochstoer, Columbia University**

### **Title: Limits to Arbitrage and Hedging: Evidence from Commodity Markets**

**Abstract:** We build an equilibrium model of commodity markets in which speculators are capital constrained, and commodity producers have hedging demands for commodity futures. Increases in producers' hedging demand or speculators' capital constraints increase hedging costs via price-pressure on futures. These in turn affect producers' equilibrium hedging and supply decision inducing a link between a financial friction in the futures market and the commodity spot prices. Consistent with the model, measures of producers' propensity to hedge forecasts futures returns and spot prices in oil and gas market data from 1979-2010. The component of the commodity futures risk premium associated with producer hedging demand rises when speculative activity reduces. We conclude that limits to financial arbitrage generate limits to hedging by producers, and affect equilibrium commodity supply and prices.

## **Anna Pavlova, London Business School**

### **Title: A Model of Financialization of Commodities**

**Abstract:** A sharp increase in the popularity of commodity investing in the past decade has triggered an unprecedented inflow of institutional funds into commodity futures markets. Such financialization of commodities coincided with significant booms and busts in commodity markets, raising concerns of policymakers. In this paper, we explore the effects of financialization in a model that features institutional investors alongside traditional futures markets participants. The institutional investors care about their performance relative to a commodity index. We find that if a commodity futures is included in the index, supply and demand shocks specific to that commodity spill over to all other commodity futures markets. In contrast, supply and demand shocks to a nonindex commodity affect just that commodity market alone. Moreover, prices and volatilities of all commodity futures go up, but more so for the index futures than for nonindex ones. Furthermore, financialization—the

presence of institutional investors—leads to an increase in correlations amongst commodity futures as well as in equity-commodity correlations. Consistent with empirical evidence, the increases in the correlations between index commodities exceed those for nonindex ones. We model explicitly demand shocks which allows us to disentangle the effects of financialization from the effects of demand and supply (fundamentals). Within a plausible numerical illustration we find that financialization accounts for 11% to 17% of commodity futures prices and the rest is attributable to fundamentals.