CAMP
CENTRE FOR APPLIED MACROECONOMICS AND COMMODITY PRICES

BI NORWEGIAN BUSINESS SCHOOL

The Centre for Applied Macroeconomics and commodity Prices (CAMP) at the BI Norwegian Business School invites PhD students and scholars to a

Mini PhD course on Oil Markets and the Macro Economy, August 20-23, 2019 Oslo, Norway

With Associate Professor **Christiane Baumeister** (University of Notre Dame, NBER and CEPR)

Organized by Professor **Hilde C. Bjørnland** (BI)

The course will cover advanced empirical research on oil market models and discuss links between oil prices and the global economy as well as oil-importing countries. The focus will be on structural vector autoregressive (SVAR) models that have been used to disentangle the sources of oil price fluctuations, to study the macroeconomic consequences of oil price shocks, and to forecast the future path of oil prices. Details are available from:
https://programmeinfo.bi.no/en/course/DRE-7011/2019-autumn

The mini-course can be accredited as a course if participants complete an assignment at the end. To register for this course please go to: https://www.bi.edu/programmes-and-individual-courses/phd/external-candidates/ or email phd@bi.no for questions. There will be no fee for attending the mini-course, but participants are expected to cover their travel and accommodation costs.

Note: Some funding is available for accommodation for registered PhD scholars.

For questions about the course content or application for funding, please email hilde.c.bjornland@bi.no.

We hope to see you in Oslo in August!

DRE7011 - Mini PhD course in Oil Markets and the Macro Economy, August 20-23, 2019 Oslo, Norway

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Day 1: 20 August, 10:00 am – 3:30 pm

We revisit the identification problem in structural VAR models and introduce a general Bayesian framework that encompasses standard identification approaches as special cases. In particular, we challenge the current practice of identification in global oil market VAR models and provide a more flexible approach for estimation and inference.

Day 2: 21 August, 09:00 am – 11:30 am

We illustrate these new ideas of identification by revisiting the role of oil supply and demand shocks in generating historical fluctuations in the price of oil and show how to implement those in practice.

Day 3: 22 August, 09:00 am – 3:00 pm

We discuss several approaches that have been used to study the effects of different types of oil price shocks on macroeconomic and financial variables. We examine the usefulness of external instruments based on narrative evidence and high-frequency information in oil futures markets, and the importance of modeling time variation. We also conduct case studies of the macroeconomic consequences of the 1986 and the 2014 oil price decline.

Day 4: 23 August, 09:00 am – 12:00 pm

We consider a set of oil price forecasting models, evaluate their out-of-sample forecasting performance and discuss the merits of forecast combination. We show how to use reduced-form VAR forecasting models to conduct structural scenario analysis and assess the risks underlying these oil price forecasts. We illustrate how forecasting techniques can be used to understand specific episodes in the oil market and shed light on the forces that triggered the 2014 oil price decline.

NOTE: During the course, handouts, Matlab codes and additional references will be provided.

Day 1-2: The Determinants of Oil Price Fluctuations

- Baumeister, C. and J.D. Hamilton (2015), "Sign Restrictions, Structural Vector Autoregressions, and Useful Prior Information," *Econometrica*, 83(5), 1963-1999.
- Baumeister, C. and J.D. Hamilton (2019), "Structural Interpretation of Vector Autoregressions with Incomplete Identification: Revisiting the Role of Oil Supply and Demand Shocks," *American Economic Review*, 109(5), 1873-1910.
- Caldara, D., M. Cavallo, and M. Iacoviello (2016), "Oil Price Elasticities and Oil Price Fluctuations," *Journal of Monetary Economics*, 103, 1-20.
- Kilian, L. (2009). "Not all Oil Price Shocks Are Alike: Disentangling Demand and Supply Shocks in the Crude Oil Market". *American Economic Review*, 99, 1053-1069.
- Kilian, L., and D.P. Murphy (2012), "Why Agnostic Sign Restrictions Are Not Enough: Understanding the Dynamics of Oil Market VAR Models," *Journal of the European Economic Association*, 10(5), 1166-1188.
- Kilian, L. and D.P. Murphy (2014), "The Role of Inventories and Speculative Trading in the Global Market for Crude Oil," *Journal of Applied Econometrics*, 29(3), 454-478.

Day 3: Oil Price Shocks and the Macroeconomy

- Alessio A., P. Pagano, and M. Pisani (2015), "Macroeconomic Effects of Precautionary Demand for Oil," *Journal of Applied Econometrics*, 30(6), 968-986.
- Baumeister, C. and L. Kilian (2016), "Lower Oil Prices and the U.S. Economy: Is This Time Different?" *Brookings Papers on Economic Activity*, Fall, 287-336.
- Baumeister, C. and G. Peersman (2013), "Time-Varying Effects of Oil Supply Shocks on the US Economy," *American Economic Journal: Macroeconomics*, 5(4), 1-28.
- Känzig, D. (2019), "The Macroeconomic Effects of Oil Supply News: Evidence from OPEC Announcements," working paper, London Business School.
- Stock, J.H. and M.W. Watson (2012), "Disentangling the Channels of the 2007–09 Recession," *Brookings Papers on Economic Activity*, Spring, 81-130.

Day 4: Forecasting Oil Prices

- Baumeister, C. and L. Kilian (2014), "Real-Time Analysis of Oil Price Risks Using Forecast Scenarios," *IMF Economic Review*, 62(1), 119-145.
- Baumeister, C. and L. Kilian (2015), "Forecasting the Real Price of Oil in a Changing World: A Forecast Combination Approach," *Journal of Business and Economic Statistics*, 33(3), 338-351.
- Baumeister, C. and L. Kilian (2016), "Understanding the Decline in the Price of Oil Since June 2014," *Journal of the Association of Environmental and Resource Economists*, 3(1), 131-158.