Meng Han

PhD Candidate in Finance
Faculty of Economics and Business
University of Groningen
P.O. Box 800, 9700AV, the Netherlands

Phone: +31 6 22607988
Email: m.han@rug.nl
Homepage: https://www.financemeng.com/
Nationality: Chinese

RESEARCH FIELDS

Major Fields: Empirical Asset Pricing, Futures Markets
Secondary Fields: Theoretical Asset Pricing, Derivative pricing

EDUCATION

- **University of Groningen** Groningen, Netherlands
  Ph.D. in Finance *2018-2022 (expected)*
  - **Thesis**: Commodities as an asset class
  - **Supervisor**: Prof. Bert Scholtens, Prof. Lammertjan Dam
- **Ocean University of China** Qingdao, China
  Master in Finance *2015-2018*
- **Qingdao University of Science and Technology** Qingdao, China
  Bachelor in Economics; Graduated with Distinction *2010-2014*

WORKING PAPERS

Commodity Momentum and Reversal: Do They Exist, and If So, Why? (Job Market Paper)
Abstract: This paper studies the momentum and reversal patterns in commodity markets and jointly explains these patterns with risk-return relation. Investigating 23 commodities for a period of fifty years, this paper examines the momentum strategies with formation and holding periods up to sixty months in commodity futures and spot markets. The results suggest quantitively similar momentum and reversal patterns in futures and spot markets once the net convenience yield (latent payoff) is included into spot return: A momentum effect starts first, followed by a reversal effect and then a momentum effect again. The durations and magnitudes of the momentum and reversal effects vary a little with the formation periods. This momentum and reversal patterns can be jointly explained by traditional asset pricing factors together with a yield factor related to the net convenience yield. The results are robust to the selection of momentum strategies and the estimation method with rolling windows.

The Net Convenience Yield and the Cross-section of Commodity Returns (with Lammertjan Dam and Bert Scholtens)
Under Review: Journal of Banking & Finance
Abstract:We study which risk factors explain the cross-section of commodity returns and decompose commodity returns into capital gains and net convenience yields. The findings reveal that a commodity-specific three-factor model performs best in explaining the

cross-section of commodity returns. As to individual commodity returns, the ability of risk factors to explain the cross-sectional variation mainly results from the yields. For commodity portfolios returns, the ability of risk factors derives from both capital gains and yields. Commodity-specific factors perform better in explaining the cross-section of portfolio capital gains, whereas asset pricing factors perform better in explaining the cross-section of portfolio yields.

What Drives Commodity Price Variation? (with Lammertjan Dam and Walt Pohl)
Abstract:We study the source of commodity price variation with asset pricing theory considering the net convenience yield as the payoff stream of holding a commodity, similar to the dividend on a stock. We relate the commodity price variation to expected future return, expected future yield growth (the net convenience yield growth), and price bubble. We find that almost all commodity price variation comes from the predictability of return and yield growth in the long run and that the predictability of yield growth has a much larger contribution, which is attributed to high correlation between yield growth and bubble shocks. A high commodity price mainly comes from high expected future net convenience yield, while a high price might relate to a high or low expected future return. These findings are consistent with the present value model in the case that future payoff makes larger contribution in driving current price. The seasonality in net convenience yield does not affect the predictability of return and yield growth.

WORK IN PROGRESS

Structural Estimation of Convenience Yield and Storage Cost (with Lammertjan Dam)

PUBLICATIONS

- ”Probability density forecasts for steam coal prices in China: The role of high-frequency factors.” *Energy* 220 (2021): 119758. (Corresponding Author)
- ”Forecasting China’s wastewater discharge using dynamic factors and mixed-frequency data.” *Environmental Pollution* 255 (2019): 113148. (Corresponding Author)
- ”Forecasting carbon prices in the Shenzhen market, China: The role of mixed-frequency factors.” *Energy* 171 (2019): 69-76. (First Author)
- ”Forecasting carbon dioxide emissions based on a hybrid of mixed data sampling regression model and back propagation neural network in the USA.” *Environmental Science and Pollution Research* 25.3 (2018): 2899-2910.
- ”Usefulness of economic and energy data at different frequencies for carbon price forecasting in the EU ETS.” *Applied Energy* 216 (2018): 132-141.

PRESENTATIONS

2021 International Risk Management Conference 2021 (IRMC2021), SOM PhD Conference, SOM PhD Seminar

2019 11th International Conference on Applied Energy (ICAE2019), fourth conference on econometric models of climate change (EMCC-IV)

Teaching Experience

Fall 2021 Responsible Finance and Investing (master), Teaching assistance

Selected Awards

2018-2022 Scholarship from China Scholarship Council (CSC)
2016 Second prize in the National Post-Graduate Mathematical Contest in Modeling, Excellent Graduate Student
2015 Second prize in the National Post-Graduate Mathematical Contest in Modeling
2014 Excellent Graduate in Shandong Province
2013 Excellent Student in Shandong Province
2012 First prize in the National Post-Graduate Mathematical Contest in Modeling, National Scholarship

Referee Service

Environmental Science and Pollution Research, Neural Computing and Applications (NCAA), Heliyon, Journal of Environmental Management, Carbon Management

Other Information

Programming: MATLAB, STATA
Languages: Chinese (native), English (fluent)

References

Bert Scholtens
Professor in Finance
University of Groningen
Duisenberg Building
Nettelbosje 2
9747 AE Groningen
the Netherlands
l.j.r.scholtens@rug.nl

Lammertjan Dam
Associate Professor in Finance
University of Groningen
Duisenberg Building
Nettelbosje 2
9747 AE Groningen
the Netherlands
l.dam@rug.nl

Walt Pohl
Professor in Finance
NHH Norwegian School of Economics
NHH, Helleveien 30
5045 Bergen
the Norway
walter.pohl@nhh.no