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Education

University of Oklahoma — Norman, OK, USA
PhD in Finance (ABD) — *August 2018 – Present*
GPA: 4.00

Erasmus University Rotterdam — Rotterdam, The Netherlands
Research Master in Finance — *September 2016 – July 2018*
Dutch GPA: 7.54 (Equivalent to A in US scale)

University of Delaware — Newark, DE, USA
Master of Science in Finance — *August 2013 – December 2014*
GPA: 3.85

Xiamen University — Xiamen, Fujian, China
Bachelor of Econ. in (Mathematical) Finance — *September 2011 – July 2013*
Bachelor of Science in Chemistry — *September 2009 – July 2013*
Cumulative GPA: 3.42

Research experience

Graduate Assistant — Norman, OK, USA
University of Oklahoma — *August 2018 – Present*
Energy finance research projects; Teach Investments and Business Finance

Research Assistant — Rotterdam, The Netherlands
Erasmus University Rotterdam — *July 2017 – June 2018*
The impacts of banking crises on society; CEO appointments

Full-Time Research Assistant — Beijing, China
Peking University — *June 2015 – April 2016*
Chinese companies' investments flows and risks; Energy economics research works: "Analysis of Crude Oil Price and Natural Gas Price" "The Interaction Effect Between US Dollar Exchange Rate and Crude Oil Price"

Finance Teaching Assistant — Newark, DE, USA
University of Delaware — *July 2014 – December 2014*
Bloomberg lab reports (presented at Bloomberg Educators Symposium 2015)
Topics: Bond yields; Interest rate swaps and carry trade; Credit rating

Teaching experience

Independent Instructor — *Fall 2022*
FIN 2303: Business Finance (in-person)
Financial statement management; Financial valuations.

Independent Instructor *Spring 2022 & Spring 2021*
FIN 3503: Investments (in-person and online)
Efficient Market Hypothesis; Classical asset pricing models; Modern portfolio theory; Pricing of equities, bonds, and derivatives

Teaching Assistant *Fall 2018*
FIN 3503: Investments
Led student group discussion sessions
Valuations of stocks, bonds, futures, and options; Modern portfolio theory; Capital markets

Research interests

Investments, Derivatives, Energy Finance, ESG

Publication

The Relation Between Petroleum Product Prices and Crude Oil Prices
With Louis H. Ederington, Chitru S. Fernando, Thomas K. Lee, and Scott C. Linn
(2021) Energy Economics (Impact factor: 9.252, 2021 Journal Citation Reports)
Article link

Abstract: We present an empirical examination of the relation between real spot Brent oil prices and real spot petroleum product prices, specifically gasoline and heating oil prices. Based upon weekly price data spanning a 30-year period ending in April 2019, we provide consistent evidence of Granger causality running from oil prices to product prices accounting for both non-stationarity of the series, and separately conditional heteroskedasticity. No evidence of Granger causality from product prices to oil prices is found for the full sample period nor the period up to the end of 2005, but evidence that gasoline prices Granger-caused oil prices is found for post-2005. Similar results are found for an extended model that also includes potentially endogenous real market variables related to supply and demand in the oil, heating oil and gasoline markets. Given the reduced form model results that oil prices Granger-cause gasoline and heating oil prices, we specify and estimate recursively identified structural vector autoregressive models that specifically account for structural supply and demand shocks in the oil market as well as the petroleum product markets. The oil market block follows Kilian (2009). We find that real spot gasoline prices and real heating oil prices do not respond to structural oil supply shocks, respond transiently to global commodity demand shocks, but do respond to oil-specific demand shocks. We conclude the result that spot oil prices Granger-cause spot gasoline and heating oil prices largely occurs through the channel of oil-specific demand shocks.

Working papers

JOB MARKET PAPER: Skewness and Kurtosis, Real Options, and Investment Under Uncertainty
Sole-authored
Latest version

Abstract: This study examines how the probability of exercising a real option is influenced by the skewness and kurtosis, in addition to volatility, of output price changes in the presence of sunk costs and irreversible investments. The motivation is a modified Real Option Valuation model that accounts for skewness and kurtosis when the underlying price change distribution is not Normal. Oil price changes exhibit both volatility, non-Normal skewness and kurtosis. I therefore study several real choices made by oil well operators. Using a large sample of oil wells (53 million well-month observations) from five oil producing U.S. states, I examine the drilling, production and shut down decisions associated with each well during the period 2010-2019. Results based upon the estimation of panel choice models and Cox Proportional Hazard models, show that the decisions made are influenced by both skewness, kurtosis, volatility and expected prices as value maximizing theory in the presence of price uncertainty and sunk costs predict. The results are not consistent with a prediction that the personal preferences of the decision makers (aside from value maximization) influence the choices studied. The results are robust to a number of alternative tests and specifications. A one standard deviation increase in skewness is associated with a 13.10% increase in the probability to close a well; a similar increase in kurtosis leads to a 11.41% increase in the likelihood of drilling a new well, compared with volatility's impacts of -44.56% and -33.59%, respectively.

Forecaster Herding, Timing and Accuracy in the Age of ESG
with Louis H. Ederington and Scott C. Linn
Latest version
Abstract: Using a panel of 19,677 forecasts of the change in natural gas in storage in the U.S. for the period 2003-2021 we find that as the focus on Environmental, Social and Governance (ESG) increased forecast accuracy in this highly "E" sensitive sector improved, and, while forecasters predominantly anti-herd (rely on private information) anti-herding intensity declined. The greater anti-herding intensity and the early release of forecasts are associated with larger forecast errors, together largely determine accuracy, and the relation is unaffected by the shift in ESG focus. The results suggest that the ESG focus had the complimentary effect of increasing attention on fundamentals. The most accurate forecasters tend to neither herd nor anti-herd, and the less accurate forecasters anti-herd. Forecasts issued early are less accurate and more dispersed. The consensus of the less accurate forecasts is found to be unbiased at a conservative confidence level both before the focus on ESG intensified as well as after. The results are robust to numerous additional test specifications.
Presentations: FMA Annual Meeting 2022 (regular program), University of Edinburgh 2022 (presented by a co-author), University of Missouri 2020 (presented by a co-author)

Electronic Trading and Price Discovery in the Oil Market
with Kateryna Holland, Scott C. Linn, and Chitru S. Fernando

Abstract: We study the impact on price discovery of a shift from open outcry to an electronic trading structure. We focus on the spot and futures markets for two major commodities, West Texas Intermediate and Brent crude oil which experienced such a shift in 2006 and 2005, respectively. We find that the futures market is the primary locale for price discovery in the WTI market both before and after the trading structure shift by NYMEX. Results are similar for Brent, yet shortly after the change by ICE both the spot and futures markets play a role in price discovery.

News Tones, Information Arrivals, and Sentiments in Commodities: In the Context of Crude Oil
Sole-authored
Abstract: I explore the impact of oil shock news on oil futures returns and analyze sentiment's role in the observed price responses. I show that negativity in "oil shocks" news tones leads to significant adverse oil futures price movements within 30 minutes of the news release. I find that text complexity reduces the magnitude of this adverse effect. More numerical data reinforces this adverse effect. The price impact is only significant if there is more uncertainty in the market and the news comes from institutional news wires.
Presentations: University of Oklahoma Brownbag Seminar (2020)

Work in progress

Commodity Pricing Bubbles
with Scott C. Linn and Ping Zhang
We use the Jarrow and Kwok (2020) non-parametric bubble estimator to obtain estimates of commodity pricing bubbles, including metals, energy, and agricultural products.

Oil Sentiment and M&A
Sole-authored
This study explores whether investor sentiment during pre-merger and negotiation windows influence the outcomes of M&A deals.

Commodity Option Implied Moments
Sole-authored
This study focuses on the connection between commodity and equity markets by examining the risk-neutral implied moments.

Honors and scholarships

Scholarship (Erasmus Research Institute of Management) *2016*
Business Scholarship (Xiamen University) *2013*
Excellent Student Scholarship (Xiamen University) *2010, 2011, and 2012*

Skills

Programming
Proficient in: Stata
Familiar with: SAS, Eviews, and Matlab
Super computer

References

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