



## Commodity Data Analysis

**November 9-11, 2016**

**Goal:** Offer a short course to equip commodity-industry professionals with basic quantitative skills related to time series statistics, forecasting, and forward curve dynamics. Offer solid practical experience in the use of a common statistical software package. Provide an affordable and accelerated curriculum for new hires, aspiring analysts, and others interested in incorporating an increased quantitative rigor into their commodity-related activities.

**Course Description:** Guided by veteran industry practitioners, and utilizing one of the most user-friendly statistics packages on the market, students will gain a core practical competency in econometrics and price modeling for the commodity markets. Students will gain basic fluency in econometric forecasting and understanding of forecast validity and uncertainty. Students will become familiar with not only the dominant methods for modeling forward curve dynamics, but also advanced methods employed by the most sophisticated market participants. Skills and techniques learned in the course will be directly applicable to solving problems and framing decisions in the workplace.

### **Day 1: Introduction to commodity industry data, EViews, and basic econometrics**

- Types of commodities time series and forward price data
- Data conventions and transformations
- Commodity-specific features in data
- Introduction to EViews statistical suite
- Fundamentals of regression analysis

### **Day 2: Advanced econometric methods**

- Stationarity
- Multivariate models
- Cointegration
- ARCH models

### **Day 3: Forward curve modeling, practice workshop**

- Term structure and seasonality
- Black-Scholes volatility
- Application of principal component analysis and factor models to forward curves
- ***Afternoon special session: Independent and group lab exercises to integrate and apply course material***

**Intended Audience:** Commodities industry employees; junior personnel in commodity-related businesses; commodity and financial derivatives traders, support functions such as attorneys, accountants, sales or HR or IT managers, etc.; government officials; non-industry professionals wishing to adopt a data-driven understanding of commodity markets.

**Duration:** 24 hours

- Offered 1-2 times a year based on demand
- First offering November 9-11, 2016





## [Commodity Data Analysis \(Continued\)](#)

**Location:** University of Colorado Denver Business School, 1475 Lawrence St., Denver, CO 80202

**Course requirements:** 3 consecutive days, in-class sessions.

Lunch and coffee (during breaks) will be provided each day. Evening reception hosted by the Center at 5:30 pm following in-class session on Wednesday (November 9).

**Program Fee:** \$2500 per participant.

**Instructors:** Daniel Jerrett and Rossen Roussev

**For more information:** Matthew Fleming, E-mail: [matthew.fleming@ucdenver.edu](mailto:matthew.fleming@ucdenver.edu), or Phone: 303-315-8019

**Credit:** Not for academic credit - Certificate issued from the J.P. Morgan Center for Commodities, University of Colorado Denver. Certified by GARP for 24 credits and University of Colorado Denver for 5 Continuing Education Units (CEUs).



**Content Director:**

Thorvin Anderson, CFA, has extensive experience in complex transaction structuring, power and gas trading analysis, physical asset dispatch, and finance. He has spent seventeen years in the commodities space, both in industry and on Wall Street, with firms ranging from Koch Industries and Calpine Corporation to Bear Stearns and J.P. Morgan. Actively involved in commodities education throughout his career, Thorvin has orchestrated and led multiple training programs focused on introducing participants to key concepts in commodities. While working in the Commodities businesses of JPMorgan and Bear Stearns, Thorvin initiated and managed rotational programs to recruit and develop junior talent in a cross-disciplinary manner. Thorvin graduated from Stanford University with a B.A. in Economics in 1997, and received his CFA Charter in 2006.

**Instructors:**

Dr. Daniel Jerrett currently holds the position of Chief Economist at the Denver Regional Council of Governments. Daniel has more than ten years of experience teaching and building econometric models. His experience spans both the private and public sectors. Daniel has spent time in the investment management industry, working with state and local governments, and consulting with Fortune 500 companies. He teaches courses in econometrics and forecasting at the University of Colorado Denver, University of Colorado School of Public Health, and regularly lectures at the University of Colorado Denver's J.P. Morgan Center for Commodities. In addition, Daniel has led econometric training courses at the International Monetary Fund and World Bank. Daniel received his Ph.D. from the Colorado School of Mines.

Dr. Rossen Roussev is Executive Director of Quantitative Research with J.P. Morgan's Global Commodities business in New York. Rossen has more than ten years of experience developing sophisticated commodity market modeling techniques for Wall Street firms. Rossen specializes in broad application of mathematical methods for pricing and hedging complex derivatives, favoring analytical approximations to complex problems and the use of machine learning for calibration and relative value. He received his Ph.D. in Physics from Rutgers University.

