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THE EFFICIENCY ANALYSIS OF CRUDE OIL SPOT AND FUTURES PRICES: A MOVING WINDOW APPROACH

Abstract:

This paper explores the efficiency of oil price behaviour during times of crisis using traditional variance-ratio tests in combination with more recent innovations such as wild bootstrapping and simulation methods. Three main oil indices were chosen: Brent, WTI and Dubai crude, in order to consider efficiency across the different oil price regimes during times of crisis. Daily data from January 1986 to September 2016 was used, and moving windows of 2, 5 and 10 years were integrated into the methodologies applied. The results were mixed across the data series and the windows showing that the different prices were not efficient over the same periods. This has implications for how we view price efficiency in oil markets and consequent implications for market regulations and investor decision making during times of crisis.

Keywords:

Energy, Crude Oil Markets, Spot and Futures Prices, Shock periods, Variance Ratio Tests, Efficiency, Decision making.

JEL Classification: E37, G01, Q47