

FUTURES TERM-STRUCTURE AND PETROLEUM SPREADS

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ABSTRACT

We employ the term-structure of gasoline and heating oil prices to explain the variation in the spread between the prices of gasoline and crude oil and the prices of heating oil and crude oil. Under uncertainty, the convenience yield implied in the term structure of gasoline and heating oil prices should be indicative of the future demand and supply conditions for crude. We demonstrate that the marginal convenience yields in the two markets explained much of the variation in the spreads between 1986 and 1999. The evidence indicates the importance of a disaggregated treatment of the term-structure of prices: the convenience yield is found to explain a substantially higher amount of the variation in the spread when it is decomposed by maturity. A similar finding with respect to the relationship between private inventories and marginal convenience yields is also reported. Finally, it is demonstrated that simple controls for the level of the marginal convenience yield explains a substantial portion of the volatility spillover from the gasoline and heating oil markets to the crude market, suggesting that the inter-commodity spillover is driven mainly by fundamentals.