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Inconvenience yield, or the theory of normal contango

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The relative impact of fundamental imbalances and financial flows on oil prices remains the subject of intense debate among market participants, economists, and policy makers. Proponents of traditional fundamental views blame the oil price spike of 2008—when U.S. crude rose to an all-time high of almost \$150 a barrel—primarily on the inability of the global refining industry to cope with the rapid demand growth from emerging markets. Conversely, practitioners tend to point towards additional demand for futures from so-called 'long-only' investors, such as pension funds, whose increased allocations to commodities shifted established balances between buyers and sellers. Unfortunately, the economic objectives of financial investments in commodities are often poorly understood, leading to incorrect characterisations of the relevant market participants and misleading conclusions about the impact of their activities on the price dynamics.

This article highlights structural changes in supply and demand for hedging services which are becoming increasingly important factors for determining the price of oil. Traditionally, there has always been more producer hedging than consumer hedging in oil markets. While investor money used to balance this gap nicely, it now far exceeds it. It is important, though, to realise that the reasons investors are coming to the oil market have changed. With contango being the 'normal' oil market structure for the last several years, investors are no longer investing in the front end of the oil market primarily in order to collect a positive risk premium driven by the roll yield. Rather, they are hedging against inflation, U.S. dollar weakness, and possible geopolitical events that could negatively impact the rest of their investment portfolios. As the traditional roles of different players change, so too do the market instruments available to them. This article applies these changes in the behaviour of market participants to the classical Keynes–Hicks theory of normal backwardation, and the Kaldor–Working–Brennan theory of storage, and looks at how calendar spread options (CSOs) are becoming an increasingly popular risk management tool.

Traditional economics postulates that the price of commodities such as oil is determined by the equilibrium between consumer demand for physical barrels and

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