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Trend-following trading strategies in commodity futures: A re-examination

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The ability of trend following strategies to succeed depends on two simple but important assumptions about the markets. First, it assumes that price trends occur regularly in the markets. Second, it assumes that trading systems can be created to profit from these trends. The futures market is one of the most liquid markets in the world and is accessed daily by hedgers, traders and investors. It enables market participants to adjust their risk profiles almost continuously. In addition, transactions costs are considerably lower and taking short positions is also much easier in futures markets. In particular, adopting trend-following strategies in commodity futures markets is a form of diversification by virtue of the asset class.

The research done by Andrew, Qian and Subhash studied two main types of strategies: momentum and pure trend-following. They analysed the performance of trend following strategies over intermediate horizons by using monthly data over a 48-year period, and then examined the simultaneous implementation over a broad range of 28 commodity futures market. Two pure trend-following strategies were back-tested, namely dual moving average crossover (DMAC) and channel strategies. The DMAC trading system uses two moving averages, one short and one long. The system trades when the short moving average crosses the long moving average. Whereas for the channel strategy, it looks at the area between two parallel trend lines which is taken as a measure of trading range. Breakout points in channel indicates bullish (upward trends) or bearish (downward trends). The holding period was one-month in this research.

The authors found that there were substantial differences in the volatility of returns across the 28 commodities, e.g., SD[1](world sugar) was nearly 5 times SD(domestic sugar). They also found that none of the individual commodity futures exhibited normality in their monthly returns. Noticing that some of the markets had relatively low trading volumes, they focused on a subset of these 28 markets that had relatively high trading volume, where trading strategies were more likely to be implemented. They used bootstrap tests, whereby the mean excess returns, SD of returns and Sharpe ratio[2] that arose from previous models were compared to randomly-generated monthly returns. Comparing the probability yields obtained by applying trading strategies to actual market data and replications by bootstrap, good similarities were found with those implied by Newey-West t-statistics, further validating the results. Moreover, their returns remained fairly impressive even if high levels of transactions costs were assumed to be imposed by the market.

In short, although the precise market effects of applying trend following strategy in a large scale setting were not tested, the paper still showed many positive aspects of trend-following strategies. It strongly suggests that trend-following strategies perform much better at intermediate timespan than very short horizons, provided that short horizons have been explored by previous researchers. When pure trend following is applied under the same framework with other strategies, it performs quite well indeed.

[1] Standard Deviation measures how much prices varied over a specified duration of time

[2] a measure of excess returns per unit of risk

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