Journal 2

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***Read the Hong and Yogo article. Discuss what you have gained about futures prices and what role they play in macro economy and interest rates.***

Economists have used futures prices as an indicator of future economic activity and future trend in asset prices. The paper argues that open interest can be more informative than futures prices in predicting these variables in the presence of hedging demand and limited risk absorption capacity in the futures markets. The paper finds that movements in commodity market interests can commodity returns, bond returns, and movements in the short rates, but can predict to a lesser degree the returns in currency and stock markets.

Most traditional theories and empirical research based on these use the net supply-demand balance among hedgers, but not on the total amount of futures outstanding. For e.g. macroeconomists have used commodity futures and spot prices to predict inflation, and financial economists have used yield spreads to predict stock and bond returns. The paper shows that open interest can be a more dependable proxy for economic activity, under the assumption that there is limited hedging demand. This assumption is important, because excess hedging demand from consumers to go long can lead to price rises, while excess hedging demand for producers to go short can lead to price declines. The futures price is highly susceptible to anticipation of higher economic activity and is therefore a less reliable indicator than open interest.

Outlined below are some of the roles futures prices and open interest play in macro economy and interest rates:

**Commodity**

The analysis is conducted on 30 commodities with equal weighted portfolios including agriculture and energy, livestock, and metals. A plot of the 12-month growth rate for commodity market returns and commodity market interest confirms high correlation. The hypothesis that movements in commodity market interest predict commodity returns is tested. The predictor variables are short rate, yield spread and commodity basis. Both the short rate and yield spread have negative coefficients, in contrast with positive coefficients found for bond and stocks. It is found that low commodity basis predicts high returns on being long commodity futures, and this is consistent with the theory of backwardation. A couple of more predictors are then introduced to the study, but the summary is as follows:

1. Short rates, yield spreads, and the Chicago Fed National Activity Index can predict commodity returns, which is consistent with the integrated markets view. These are the same aggregate factors that drive other asset prices.
2. Commodity basis and commodity market imbalance can predict movements in commodity prices. This is consistent with the segmented markets view. Movements in commodity markets interest can predict movements in commodity prices even after controlling for these factors. This raises the hypothesis that commodity market interest contains important information about the future demand and supply of commodities, and this information cannot be inferred by commodity prices alone.
3. The forecasting power of the commodity market interest can be compared to that of the yield spread when predicting bond returns. The fact that commodity market interest can predict excess bond returns implies that it also captures changes in expected inflation at low frequency. Also, since movements in the short rate can be interpreted as movements in expected monthly inflation under the Fisher hypothesis, commodity markets can predict short rates and therefore also predict movements in inflation at higher frequency.

**Currency**

Throughout the sample period, the study finds that movements in currency market interests lead to movements in currency returns, except for a period in the 1990s. The findings suggest that currency market interest is a more important determinant of exchange rates than currency basis.

**Bond**

It is found that bond market interest is positively correlated with the Chicago Fed National Activity Index. Past bond returns do not have forecasting power for future bond returns, and bond market imbalance do not have forecasting power for bond returns. Bond market interest and Chicago Fed Index can both signal inflation, a finding consistent with the paper’s hypothesis.

**Stock**

Introducing the stock market interest to the baseline equation returns a statistically insignificant coefficient. However, the economic magnitude of the coefficient can be compared to that of the short rate, yield spread, and dividend yield.

**Conclusion**

Commodity market interest is a more powerful predictor of commodity returns, bond returns, and movements in the short rate, compared to past commodity prices or the Chicago Fed National Activity Index. The paper opens a whole new way of thinking about asset returns, as traditional forecasting models have mostly focused on assumptions that asset prices contain timely information about economic activity and inflation expectations. The findings show that transaction quantities, specifically open interest in the futures market, contain information not fully contained by transaction prices alone. The idea that transaction quantities can contain more information than transaction prices offers a whole new arena of further research that can be conducted to predict asset returns.