Futures markets: role of non-commercial traders

ICC-124-5

124nd Session - International Coffee Council
Nairobi, Kenya

CYCLES OF HIGH AND LOW COFFEE PRICES, 1994 – 2018

Shaded areas: periods of decreasing prices
SIX MEASURES OF SPECULATION

- Monthly volume of futures contracts
- Monthly open interest in futures contracts
- Ratio of volume to open interest
- Ratio of long positions held by non-commercial traders to total reportable long positions
- Ratio of short positions held by non-commercial traders to total reportable short positions
- Index traders’ net positions (= long minus short)
  - Arabica futures market only
MEASURES OF SPECULATION

1. Volume

Measure of liquidity in the market – attracts investors
Weak measure of speculation

2. Open interest

Indicator of trading interest, confidence in the market – attracts medium-long term investors

3. Ratio Volume / Open interest

Measure of short-term speculation: high volumes with low open interest = higher ratio
MEASURES OF SPECULATION: NON-COMMERCIAL POSITIONS TO TOTAL REPORTABLE POSITIONS

4. Long
5. Short

Commercial traders use futures contracts for hedging purposes (CFTC).
Non-commercial positions (short or long) mainly represent speculative activity in pursuit of financial profits.

MEASURES OF SPECULATION

6. Index traders’ net positions

Measure of speculation: These traders hold positions in a mix of commodity markets.
Assumption: purposes other than hedging against commodity-specific risks (Robles et al., 2009).
GRANGER CAUSALITY TESTS

- Time series analysis
- Two statistical models:
  - M1: Relationship between the past behaviour of prices with their current level (forecasting)
    \[\text{Price}_t = f(\text{Price}_{t-1}, \ldots, \text{Price}_{t-n})\]
  - M2: Incorporates past speculation activity in M1 to assess its predictive power on present spot prices
    \[\text{Price}_t = f(\text{Price}_{t-1}, \ldots, \text{Price}_{t-n}, \text{Speculation}_{t-1}, \ldots, \text{Speculation}_{t-n})\]
GRANGER CAUSALITY TESTS

• Estimation of M1 and M2 = Fstatistic

• Test:
  
  \[ \text{Test} = F\text{statistic} - F\text{critical value} \]

  at a 95% statistical confidence level

• If the difference is at least zero (=>0):
  
  ➔ there is evidence of influence or predictive power of speculation on coffee prices

• Values greater than zero only indicate a higher statistical confidence level, ex: 99%
  
  • No strong influence or power of speculation

Results
ARABICA

Note: Dates indicate last month of a 50-month period

ROBUSTA

Note: Dates indicate last month of a 50-month period
CONCLUSIONS

• Speculative activity has predictive power over spot market prices in specific short time periods.

• No significant evidence of speculative activity affecting spot market prices during the recent downturn of the coffee market since 2016

• Speculation can exacerbate price trends in the short-term, but fundamentals (demand trends and supply shocks) prevail in the long-term

CONCLUSIONS - REGULATION

• Regulatory interventions can help to manage the impact of speculation:
  – Limiting the positions held by non-commercial traders
    • Dodd-Frank Wall Street Reform and Consumer Protection Act in the US
  – Increasing costs of non-hedging participation in the market
  – Imposing capital requirements for each transaction