Coffee Futures Option Analysis - Senior Analyst Report

1. Why Use Each Model:

- The Cost of Carry Model estimates the fair value of the futures contract by incorporating storage cost and the risk-free rate.
- The Black-Scholes Model is adapted for futures to price European call options based on volatility and time to maturity.

2. Why Use Each Technique:

- Cost of Carry helps us understand arbitrage-free pricing.
- Black-Scholes provides a risk-neutral framework for pricing options accurately.
- We use d1 and d2 to assess the probability of profit under a risk-neutral world.

3. What I Have Found:

- Calculated Futures Price (F): $1.2181
- d1: -0.0577, d2: -0.2345
- European Call Option Price: $0.0712
- Interpretation: The option is less likely to end in profit since d2 = -0.23 is negative. This implies the futures price is expected to stay below the strike price ($1.25), making the option relatively inexpensive and less likely to be exercised.

4. What Moves the Company Must Make:

- Consider purchasing the call option if anticipating a rise in coffee prices above $1.25 in 6 months.
- If downside risk exists, use options as insurance.
- Monitor volatility and weather/geopolitical events closely as they strongly influence future prices.