Macquarie Bank Limited

Coping with Volatility in the Coffee Value Chain
Coffee markets:

- Volatile supply + stable demand + speculator trading = volatile prices
The best performing commodity this year so far
Huge price movements this year so far

NY arabica coffee
But we have been here before too, coffee markets are notoriously volatile.
How much of this has been driven by the speculators?

Managed Money & Swap Dealers as a % of Total OI
Futures Price
They are an active bunch, and are influenced by macro as well as fundamentals.
For coffee, Brazil’s cyclical yield patterns as well as currency influence prices.
Hot and dry weather has led to sharp losses in Brazil’s Arabica crop.

Precipitation as % of normal past 45 days

Temperatures have been well above average too.
The final yield loss will only really be known at the de-husking or harvest stage.

We expect Brazil’s crop to fall to 50-53m bags this year.

The beans may not have formed inside the cherries.
Until then, it’s a weather market, so expect volatility to continue. The longer term weather forecasts are pointing to drier than normal weather through to May.
Costs of production of coffee have been rising steadily.
The roya fungus issue has plagued Central American coffee production.
Demand tends to be fairly stable, although the potential upside is huge.
Price movements can prompt some consumer switching between coffee types.
World coffee supply/demand balance

Combined coffee S/D balances

Arabica coffee S/D balance

- Mn bags
- S/D Arabica (Oct/Sep)
- Market Balance

Robusta
Arabica
Balance
Production
Consumption
As we potentially move to a deficit, stocks will draw down, causing prices to rise higher.
So how do we cope with such uncertainty and volatility?
Where we are now

ICE "C" Coffee - First Contract
Historical Prices

Source: Bloomberg
What Do We Mean By Volatility?

ICE "C" Coffee - Second Contract
Volatility

Source: Bloomberg
Variance Versus Volatility

ICE "C" Coffee - First Contract
Implied Volatility and Monthly Variance

Source: Bloomberg
Ways to Cope With Price Volatility

- Do nothing and hope for the best.
- Punt – try to pick the bottom of the top.
- Let consumers, producers, or the tax payer bear the risk.
- Understand your enterprises profit drivers.
- Create an overarching risk management policy and strategy
- Buy volatility
- Use structures.
- Diversify
Buying Volatility
Vanilla Call Option

ICE "C" Coffee - December 2014
Historical Prices

Contract: KCZ4 (at 193.00 c/lb)
Expiry: 14 Nov 2014
Option Type: Call option
Strike: 220 c/lb
Cost: 24.00 c/lb

Source: Macquarie, Bloomberg
Buying Volatility
Vanilla Put Option

Contract: KCZ4 (at 184.50 c/lb)
Expiry: 14 Nov 2014
Option Type: Call option
Strike: 200 c/lb
Cost: 15.50 c/lb

Contract: KCZ4 (at 193.00 c/lb)
Expiry: 14 Nov 2014
Option Type: Put option
Strike: 170 c/lb
Cost: 18.00 c/lb

ICE "C" Coffee - December 2014
Historical Prices

Source: Macquarie, Bloomberg
Buying Volatility
Reducing premium to be paid

ICE "C" Coffee - December 2014
Historical Prices

Contract: KCZ4 (at 193.00 c/lb)
Expiry: 14 Nov 2014
Option Type: Enhanced Average
Cost: 22.50 c/lb (vs 31 atm)
Producer Structure
Trigger Reset

ICE "C" Coffee - December 2014
Historical Prices

Contract: KCZ4 (at 193.00 c/lb)
Expiry: 14 Nov 2014
Deal Type: Daily Trigger Reset
Expiry Double-Up
Cap: 170 / Reset Level: 230
Cost: Zero

Source: Macquarie, Bloomberg
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