



Risk Management Discussion

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Bunge Investor Day

We are Experts at Managing Physical Flows

- **From farmer to customer, across geographies**

- **We know our customers and their requirements**

- **But farmers sell and customers buy at different times**
 - We have one chance to serve each customer

- **We manage timing gaps and margins in the chain**

- **Shifts in flow generate opportunities**
 - Global footprint is an advantage

Every Transaction Presents Multiple Opportunities and Risks

Sale of Argentine soybean meal to Europe for delivery at a later date

- Potential opportunities:
 - Lock in total crush margin: buy soybeans, sell oil
 - Leave crush margin open: leave meal sale open; sell oil but leave soybeans open; buy soybeans but leave oil open
 - Arbitrage: supply equal quality meal at a cheaper price from an alternative location
 - Manage transportation: leave ocean freight open in expectation of weaker freight markets

Global footprint, integrated value chain, asset base, customer relationships and logistics enhance insights and decision making

Strong Fundamental Economic Analysis

Foundation

- Bunge's global insight into production and demand drivers
 - Interaction with farmers and meal, oil, grain, sugar and rice customers around world
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Process

- Dynamic, inclusive and disciplined
- Identification of supply and demand imbalances via proprietary approach
- Virtual “live” global supply/demand visibility supports decision making
- Senior product line managers and economic analysis teams conference daily
 - Evaluate market conditions and scenarios
 - Assess enterprise impacts
 - Develop and execute strategies in globally coordinated manner

Global product line leadership and coordination essential to execution

Common Commodity Related Risks

Flat Price

- Directional price risk based on global supply/demand imbalances and macro fund flows

Spreads

- Calendar – based on unique commodity dislocation
- Intra-commodity – based on opinion as to relative value

Basis

- The movement of the physical price relative to futures in a location
- Based on supply/demand in a location, not a general statement about price

Margins

- Origination, storage, and export margins
- Crush/Refining/Milling margins – based on supply/demand of capacity

Transportation

- Ocean freight, barge and rail freight– based on supply/demand of transport

Other risks

- FX, energy, interest rates and counterparty also actively managed

Two More Examples

1. Managing a storage margin in the U.S.

2. Managing a sunseed crush margin in Europe

Example 1: Managing a Storage Margin

Situation:

*It's harvest time and a farmer wants to sell corn at \$4.00/bushel
We only get one chance.
What should you do?*

- **Internal analysis**

- Historically a cheap basis and represents better carry than beans/wheat

- **Steps:**

- Buy the corn
- Sell futures to hedge price risk and establish basis.

- **Options:**

- Choose to hold the grain and await basis appreciation or lock in a deferred sale when possible
- Evaluate for better yielding commodities as time goes on
- At time of load out execute to the best paying market – export/domestic

Example 2: Managing a Sunseed Crush Margin

Situation:

*It's August in Ukraine and the sunseed harvest is fast approaching
Farmers want to sell and crush margins are good*

- **Considerations**

- Sunseed has different profile than corn
- No futures markets in which to hedge
- Sun oil and meal cannot be sold in volume for forward delivery, thereby limiting the ability to lock in crush margin for larger volumes

- **Options:**

- Buy seed and hope for the best
- Wait and buy later with risk that supply is exported or bought by competitors
- OR find alternative ways to manage risk

Example 2: Managing a Sunseed Crush Margin

Internal analysis

- Sun oil is priced too low relative to soy oil and will gain in global trade
- Sun oil is also cheaper than rapeseed oil in Europe and will gain in food demand
- Soy oil is cheaper source for biodiesel than rapeseed oil and will take away rapeseed oil demand
- **All indicators point to eroding demand for rapeseed oil**

Steps

- A liquid forward physical market for rapeseed and rapeseed oil exists in Western Europe on the LIFFE exchange
- Buy sun seed
- Hedge it by selling the more expensive rapeseed oil/seed in expectation of rapeseed oil losing value relative to sun seed oil, thereby enhancing the crush margin

Example 2: Managing a Sunseed Crush Margin

In this example, Bunge enhanced its margin, but also assumed additional risk

- While a short rapeseed oil was a logical hedge, a sudden change in biodiesel mandate and/or limitation of other oils in biodiesel could have created artificial demand for rapeseed oil
- A rapid move higher in energy prices could boost biodiesel demand faster than substitution effect could take place
- A dramatic devaluation of the local currency could create an exaggerated movement in sun seed, with limited ability for the market to absorb quickly
- A quality issue could result in a ban on imports of sun oil to Europe, hence reducing substitution response to lower prices

These risks are considered in the risk/reward scenario. A view on each possible outcome is critical. It's part of the process.

Global Risk Controls

Risk limits represented in form of VAR and volume by commodity

- Limits based on global business activities and key managers' recommendations
- Reviewed by chief risk office (CRO) and approved by Bunge Board finance & risk policy committee
- Risk capital allocated according to business needs and opportunities to optimize returns
- Global agribusiness product line managers lead the risk management process, but with oversight by CFO and CRO , including stress testing and simulation
- Daily VAR calculated in two standard deviations of historical prices
- Risk reported daily, consolidated by product line and geography
- Daily P&Ls for major risk positions based on mark-to-market principles

All risks are managed by clear processes and within established limits



Thank you.