Managing Price Risk without a Futures Market

David Becker
David.becker@fastmarkets.com
516.263.4327

For Information Purposes

What We Will Discuss

For Information Purposes

- What is Hedging?
- Why firms hedge?
- What do firm's hedge?
- How to hedge without a futures market
- Example of How to Manage Price Risk without a Futures Market
- Questions

Disclaimer

- DISCLAIMER
- This Disclaimer is in addition to our Terms and Conditions as available on our website and shall not supersede or otherwise affect these Terms and Conditions. Prices and other information contained in this publication have been obtained by us from various sources believed to be reliable. This information has not been independently verified by us. Those prices and price indices that are evaluated or calculated by us represent an approximate evaluation of current levels based upon dealings (if any) that may have been disclosed prior to publication to us. Such prices are collated through regular contact with producers, traders, dealers, brokers and purchasers although not all market segments may be contacted prior to the evaluation, calculation, or publication of any specific price or index. Actual transaction prices will reflect quantities, grades and qualities, credit terms, and many other parameters. The prices are in no sense comparable to the quoted prices of commodities in which a formal futures market exists.
- Evaluations or calculations of prices and price indices by us are based upon certain market assumptions and evaluation methodologies, and may not conform to prices or information available from third parties. There may be errors or defects in such assumptions or methodologies that cause resultant evaluations to be inappropriate for use. Your use or reliance on any prices or other information published by us is at your sole risk. Neither we nor any of our providers of information make any representations or warranties, express or implied as to the accuracy, completeness or reliability of any advice, opinion, statement or other information forming any part of the published information or its fitness or suitability for a particular purpose or use. Neither we, nor any of our officers, employees or representatives shall be liable to any person for any losses or damages incurred, suffered or arising as a result of use or reliance on the prices or other information contained in this publication, howsoever arising, including but not limited to any direct, indirect, consequential, punitive, incidental, special or similar damage, losses or expenses.
- We are not an investment adviser, a financial adviser or a securities broker. The information published has been prepared solely for informational and educational purposes and is not intended for trading purposes or to address your particular requirements. The information provided is not an offer to buy or sell or a solicitation of an offer to buy or sell any security, commodity, financial product, instrument or other investment or to participate in any particular trading strategy. Such information is intended to be available for your general information and is not intended to be relied upon by users in making (or refraining from making) any specific investment or other decisions. Your investment actions should be solely based upon your own decisions and research and appropriate independent advice should be obtained from a suitably qualified independent adviser before any such decision is made.

What is Hedging?

For Information Purposes

- Hedging is mitigating your price risk
- Remove the volatility in your cash flow
- Lock-in Margin

- Price
  - Input prices
  - Output prices

Why Hedge

For Information Purposes

Businesses need to determine how much risk they are prepared to assume

- They may want to eliminate as much price risk as possible
- They may be prepared to take on risk and determine the optimal amount of risk to take

This will determine if you are:

- Fully Hedged
- Partially Hedged
- Unhedged

Price hedging, fixes your input costs and your output revenue

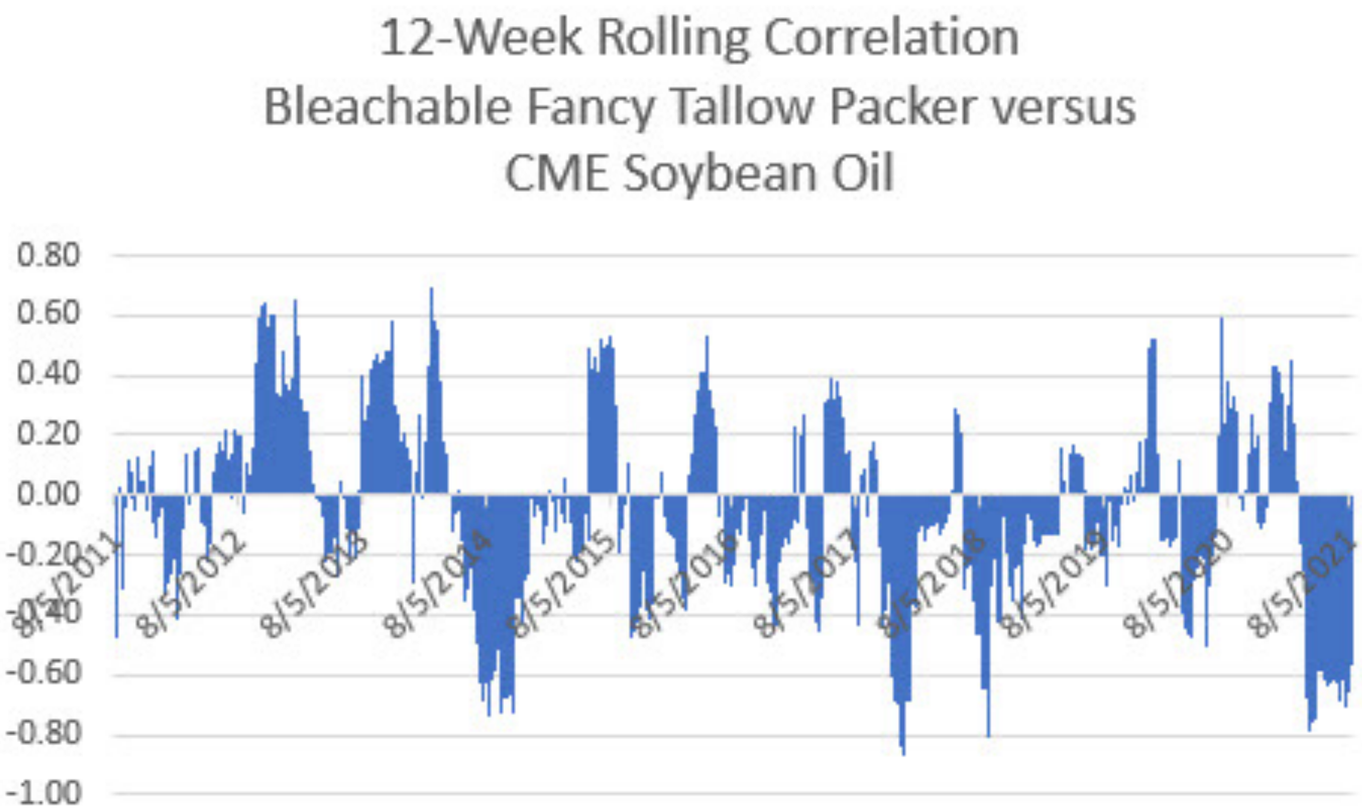
What To Hedge

For Information Purposes

- If you plan to mitigate price risk a precise hedge will result from using an instrument that mimics the movements of your input price or your output prices.
- To test whether an instrument is accurate you can run a rolling correlation.
- What is correlation? (how much the returns of one asset move in tandem with another asset)
- Correlation Coefficient between 1 and -1

For Information Purposes

Average Correlation -0.07



Why are Futures Markets Important

For Information Purposes

- Futures markets help mitigate price risk
- Futures markets reduce credit risk as a feature of removing price risk
- Clearing and posting Initial and maintenance margin

How to Hedge Without a Futures Market

For Information Purposes

- OTC Swaps
- OTC Options
- What is available now

How to Hedge Without Futures Contracts

For Information Purposes

- An OTC swap is a contract between two parties that involves the exchange of pre-agreed cash flows
- One party pays a fixed cash flow and the other pays a floating cash flow
- In other words, one party is buying and the other is selling
- The payout is the difference in the fixed price level and the floating price (which is the average monthly price of a Fastmarkets price throughout a calendar month)
- The issue with a swap is credit risk

How to Hedge Without Futures Contracts

For Information Purposes

- Over-the-Counter Options
- Options are the right but not the obligation to purchase or sell an asset at a specific price (strike price) on a certain date (expiration date/settlement date)
- Call Option
- Put Option
- The option buyer pays the option seller a premium for the right to buy or sell
- Credit Risk is eliminated for the party that receives the premium (paid upfront)

How to Hedge Without Futures Contracts

For Information Purposes

- What is available now

- If your price exposure is a Jacobsen/Fastmarkets price you can use Stable to hedge your price risk
- Stable will sell Call Option (spreads) and Put Option (spreads) that will pay out if the underlying Jacobsen/Fastmarket price you choose rises (in the case of a Call Option) or falls (in the case of a Put Option)
- Stable only sells Call Option (spreads) and Put Option (spreads).
- Call/Put Option spread limits the amount Stable can lose if the price moves in your favor

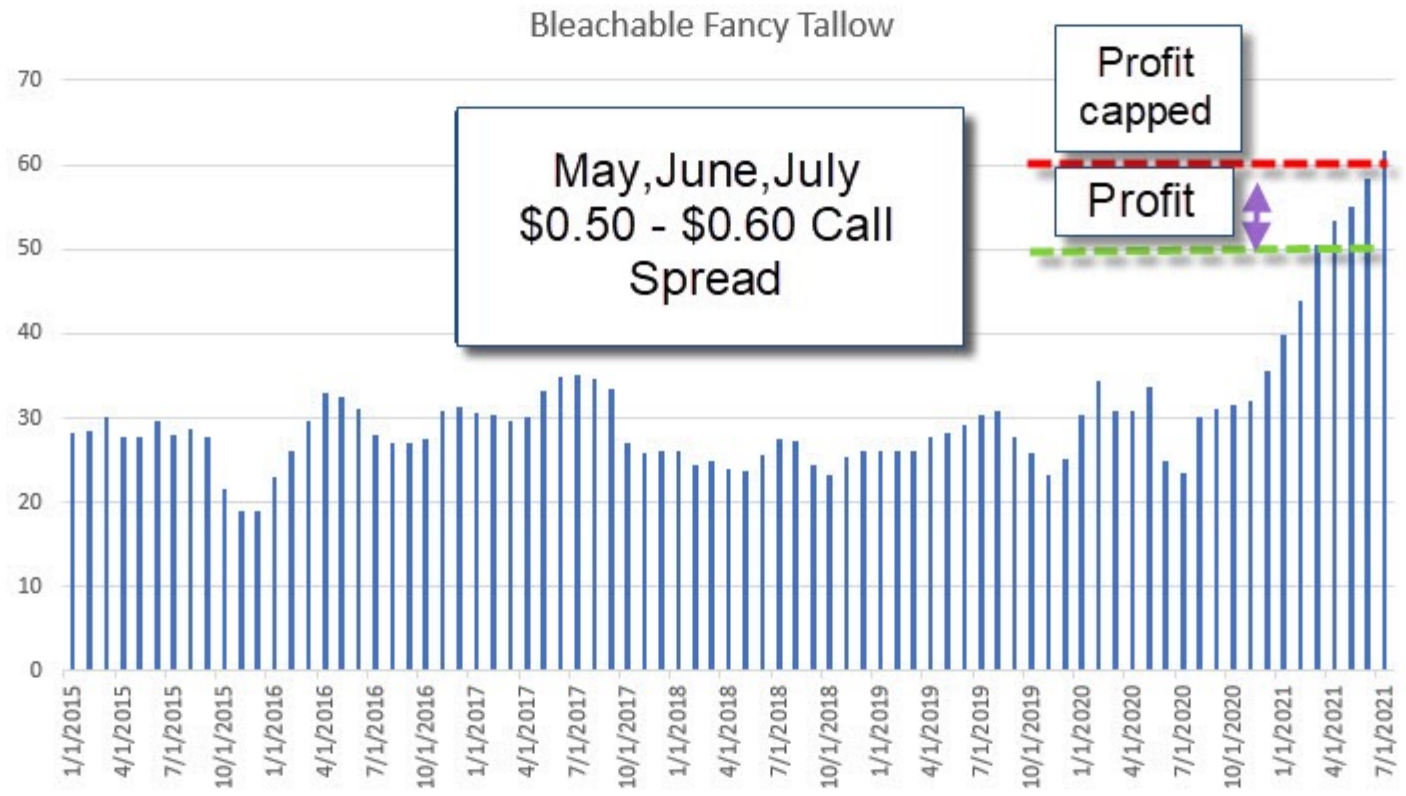
How to Hedge Without Futures Contracts

For Information Purposes

- Stable says it is backed by a Triple A to A rated consortium of firms which include insurance companies and banks
- Each trade is customized, there are no generic options
- Stable and its consortium take all the risk, they do not lay the risk off to another counterparty
- Stable provide a "Long Form" confirmation which includes language that mimics language in the International Swaps and Derivatives Agreement. This includes the default language and interruption language
- Settlements are customized (monthly, quarterly, annually), against the average period for the reference price (Average Rate Option or Asian Option Settlement)

Example Settlement

For Information Purposes



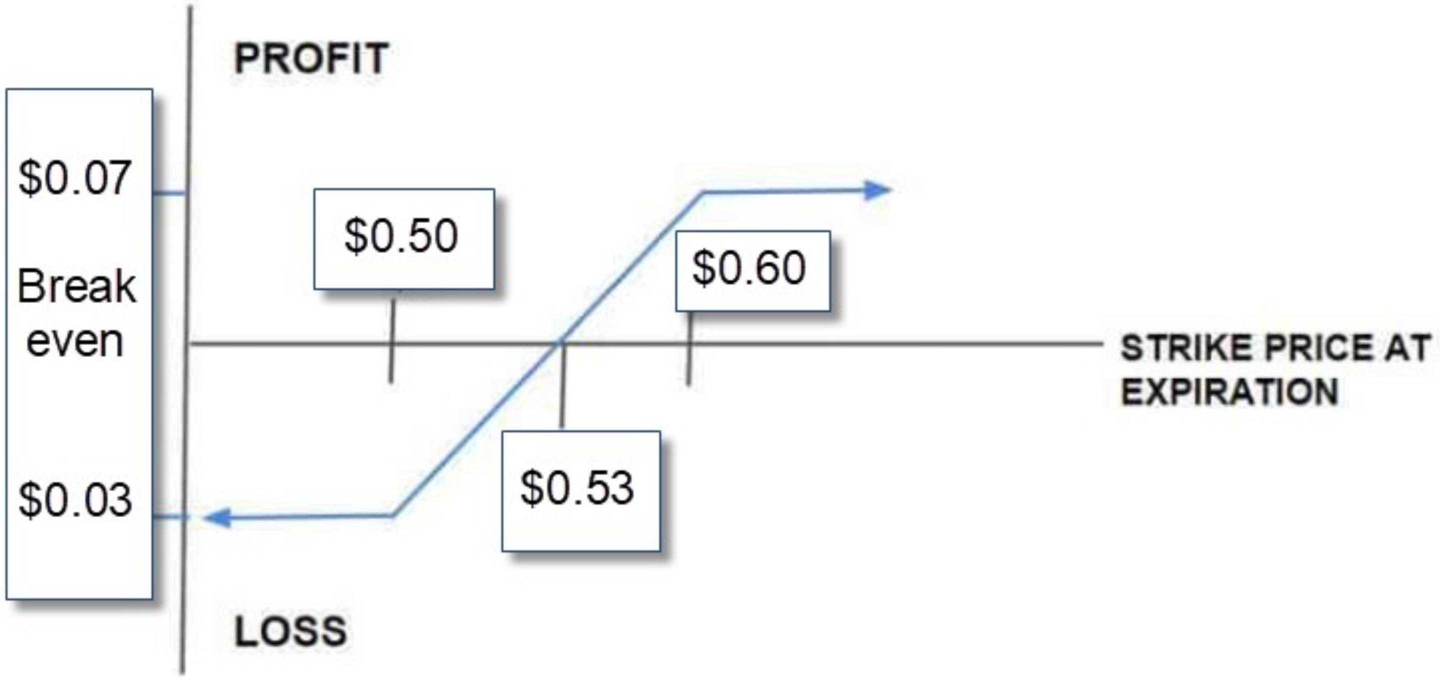
Monthly Payout Example

For Information Purposes

- May payout = \$0.5495 - \$0.5000 (\$0.0495 - \$0.03 (premium)) = \$0.0195
- June payout = \$0.5841 - \$0.5000 (\$0.0841 - \$0.03 (premium)) = \$0.0541
- July payout = \$0.6176 - \$0.5000 (\$0.1000 - \$0.03 (premium)) = \$0.0700

Example Payoff

For Information Purposes



Summary

For Information Purposes

- Hedging mitigates cash flow volatility
- Businesses want to use a correlated asset to hedge your price exposure
- Futures reduce price risk and credit risk
- Swaps reduce price risk and create two-sided credit risk
- Options reduce price risk create one sided credit risk
- Option spreads cap price risk and reduce premiums
- The Stable product uses Fastmarkets/The Jacobsen data to generate average priced options

Questions

For Information Purposes

- Have any Stable options been traded using Fastmarkets/The Jacobsen data?
- Can the Stable option buyer take profit?
- Are the options premiums cheaper with a longer averaging period?
- How Do I contact Stable?

David.Becker@Fastmarkets.com
516 263 4327