Commodities: Hedging, Regulation, and Documentation

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What is a Commodity?

- **Black’s Law Dictionary definition of Commodities:** Goods, wares, and merchandise of any kind; movables; articles of trade or commerce.

- **Commodity Market:** A market that trades in the economic sector rather than manufactured products. There are over fifty commodity markets worldwide.
Types of Commodities

- **Grains, Food & Fiber:**
  - corn, oats, rice, soybeans, rapeseed, soybean meal, soybean oil, wheat, milk, cocoa, coffee, cotton, sugar, orange juice

- **Livestock & Meat:**
  - lean hogs, live cattle, feeder cattle

- **Energy:**
  - WTI crude oil, Brent crude, ethanol, natural gas, heating oil, gulf coast gasoline, RBOB gasoline, propane, PTA

- **Metals:**
  - Copper, lead, zinc, tin, aluminum, nickel, cobalt, recycled steel, molybdenum, gold, platinum, palladium, silver

Commodity Price Risk - Hedging

- Protection against the impact of a potential negative event.
  - similar to insurance
  - hedging occurs almost everywhere, and we see it everyday

- Hedging tool for commodity price risk
  - Financial derivative products
Financial Derivative Products

- Financial derivative products are used for risk management purposes (hedging) or to increase exposure to price movements (speculation)
  - futures, options, swaps.
  - over 90% of the 500 largest companies worldwide use derivative products to manage and hedge against their business risks

- Derives its value from an underlying asset
  - commodity (soybeans) or financial (interest rates)
  - Example: interest rate swap
    - 2 party contract for the exchange of interest rate payments at set times
    - exchange of a fixed interest rate for a floating interest rate to reduce exposure to interest rate fluctuations.

Commodity Hedging Basics

- The commodity markets are primarily made up of speculators and hedgers.
  - Speculator takes on risks in the markets to make money.
  - Hedger:
    - Person or company that is involved in a business related to a particular commodity.
    - Usually a producer of a commodity or a company that needs to purchase a commodity in the future.
    - Key = limit adverse effects of price risk.
Commodity Contract Lingo

- **Futures Contract:**
  - agreement to buy or sell a particular commodity at a pre-determined price in the future (posted futures price on exchange - CME)
  - quality and quantity of the underlying asset stated
  - standardized to facilitate trading on a futures exchange (CME)
  - physical or financial settlement
  - used for reducing commodity price-fluctuation risks (hedging) or taking advantage of price movements (speculating)

- **Spot Price Contract:**
  - local cash price of a commodity traded
  - priced for immediate (or within 2 days of the trade date) delivery.

- **Basis:**
  - difference between the futures contract price and the spot price contract price of the same commodity at any given point in time
  - used to determine the best time to buy or sell a commodity and when to use the futures market to hedge a purchase or sale

Using the Futures Market to Hedge

- Futures are the most popular tool or asset class used for hedging.
- Hedging through future agreements between two parties has been in existence for decades.

- **Parts of Hedge:**
  1. Spot Price (also called cash position in the market for the hedged commodity)
  2. Futures Market Contract Price: the commitment in the futures markets that a hedger makes to limit risk (also called a position in the futures market)
    - One of the positions will move in favor of the hedger and the other will move against the hedger.
    - A perfect hedge would have the hedge spread not change at all during the course of the hedge. This would make the hedger no better off or no worse off by the time the final goods are actually bought or sold.
Hedging in the Futures Market: Soybean Production

- A farmer expects one unit of soybeans to be ready for sale in six months’ time.
  - The current spot price of soybeans is $10 per unit.
  - After considering plantation costs and expected profits, he wants the minimum sale price to be $10.1 per unit, once his crop is ready.
  - The farmer is concerned that oversupply or other uncontrollable factors might lead to price declines in the future, which would leave him with a loss.

Farmer: Soybean Hedge

- Here are the parameters:
  - Price protection is expected by the farmer (minimum $10.1)
  - Protection is needed for a specified period of time (six months)
  - Quantity is fixed: the farmer knows that he will produce one unit of soybeans during the stated time period
  - His aim is to hedge (eliminate the risk/loss), not speculate

- Futures contracts, by their specifications, fit the above parameters:
  - They can be bought/sold today for fixing a future price
  - They are for a specified period of time, after which they expire
  - Quantity of futures contract is fixed
  - They offer hedging

- Farmer sells a futures contract at $10.1.
Farmer: Soybean Hedge

- Potential Scenarios:
  - Price of soybeans shoots up to $13 in six-months’ time
    - Farmer will incur a loss of $2.9 (sell price-buy price = $10.1-$13) on the futures contract
    - Farmer will be able to sell his soybeans at market rate of $13
    - Net sale price of $13-$2.9 = $10.1
  - Price of soybeans remains at $10
    - Farmer will benefit from the futures contract ($10.1- $10 = $0.1)
    - Farmer will sell his soybeans at $10
    - Net sale price at $10+$0.1 = $10.1
  - Price declines to $7.5
    - Farmer will benefit from the futures contract ($10.1 - $7.5 = $2.6)
    - Farmer will sell his crop produce at $7.5
    - Net sale price $10.1 ($7.5+$2.6).

Results: Soybean Hedge

- All 3 scenarios:
  - Farmer shields his desired sale price by using futures contracts.
  - Soybeans are sold at available market rates, but the fluctuation in prices is eliminated by the futures contract.

- Costs and Benefits of Hedging:
  - At the $13 price, without a futures contract, he would have benefited by selling at a higher price of $13. (would have made $2.90 more)
  - At the $7.5 price, without a futures contract, he would have suffered a loss. (would have lost $2.60)
  - But in all cases, he is able to achieve the desired hedge.
Hedging in the Futures Market: Soybean Consumption

- A soya oil manufacturer needs one unit of soybean in six-months’ time.
- Consumer is worried that soybean prices may shoot up in the near future.
- Consumer can buy the same soybean future contract to lock the buy price at his desired level of around $10, at $10.1.

Consumer Soybean Hedge

- Potential Scenarios:
  - Price of soybeans shoots up to $13
    - Consumer will profit by $2.9 (sell price-buy price = $13 - $10.1) on the futures contract
    - Consumer will buy soybeans at market price of $13
    - Net buy price of -$13+$2.9 = -$10.1 (negative indicates buying).
  - Price of soybeans remains at $10
    - Consumer will lose on the futures contract ($10- $10.1 = -$0.1).
    - Consumer will buy soybeans at $10
    - Net buy price to -$10-$0.1 = -$10.1
  - Price of soybean declines to $7.5
    - Consumer will lose on the futures contract ($7.5 - $10.1 = -$2.6).
    - Consumer will buy soybeans at market price of $7.5
    - Net buy price to -$7.5-$2.6 = -$10.1.
Results: Consumer Soybean Hedge

- All 3 scenarios:
  - the soya oil manufacturer is able to get his desired buy price, by using futures contract.
  - the actual crop produce is bought at available market rates.
  - the fluctuation in prices is mitigated by the futures contract.

Hedging as Risk Management Tool

- Both the producer (farmer) and the consumer (soya oil manufacturer) were able to use the same futures contract at the same price, quantity, and expiry to meet their risk management needs.

- Objectives met:
  - able to secure their desired price to buy/sell the commodity in the future
  - risk did not pass anywhere, but was mitigated

- The futures exchange:
  - matches the buyer/seller
  - enables price discovery and standardization of contracts
  - eliminates counter-party default risk, which is prominent in mutual forward contracts
Challenges to Hedging

- Posting of Margin
  - Most hedging is done on an exchange (CME) through a broker. The exchange will require margin (performance bond/collateral to be posted) based on the daily mark-to-market value of the contract (about 10 to 20% of the contract’s value).

- Reduction in High Profit Realization
  - Using futures takes away the higher profit potential in some cases (as cited above). It can lead to different perceptions in cases of large organizations, especially the ones having multiple owners or those listed on stock exchanges.

- Mismatch of Contract Details:
  - Contract size and physical specifications may not always perfectly fit the required hedging coverage.

- Speculator Price Manipulation
  - If the futures market is not efficient and not well regulated, speculators can dominate and impact the futures prices drastically, leading to price discrepancies at entry and exit (expiration), which undo the hedge.

When to Hedge

- Timing is everything

- Some companies fail to hedge at all
  - Airline hit with high fuel costs due to climbing oil prices
  - Huge losses and bankruptcy
  - Crude oil hedges could have eased the hit

- Farmers waiting to hedge too long become speculators
  - Crop prices climb in the early summer
  - High hopes lead to failure to hedge

- Commodity Futures Exchanges exist and were created to provide risk management tools and hedging.
How to Hedge

- Exchange Traded Contract – futures and options contracts that are listed and traded on a recognized exchange via trading platforms of open outcry (in the "trading pit") or electronic trading (Globex).
  - Done directly with the exchange or through a Broker
  - Chicago Mercantile Exchange (CME)
    - generally an exchange for financial and derivative agricultural commodity contracts
    - largest number of options and futures contracts outstanding of any exchange worldwide
    - in addition to commodities, CME trades interest rates, equities, currencies and alternative investments such as weather and real estate derivatives
  - New York Mercantile Exchange (NYMEX)
    - generally an exchange for energy products and metals
- Over-the-Counter Financial Derivative Contract
  - ISDA Agreement
  - Sophistication and Asset Requirements

Regulation of Commodities

- Origins of the commodities marketplace: farmers needed a central place to buy and sell the crops they produced.
- Chicago Board of Trade (CBT) became the first commodity market in the United States, created by grain merchants in need of:
  - order and predictability
  - organization that would enforce merchant contracts or allow for recovery of profits lost.
- CBT provided first type of commodity regulation in setting rules for:
  - buying, weighing and grading grain
  - arbitrating commercial disputes in grain trading (now known as NGFA Arbitration).
- State and local lawmakers viewed the commodity futures contract CBT offered as a form of gambling, which led to federal regulation.
Federal Regulation of Commodity Trading

- **Grain Futures Trading Act (1922)**
  - Oversight regulation over grain futures
  - Exchanges were required to
    - Be licensed and designated as contract markets for particular futures contracts and
    - Provide for the prevention of price manipulation

- **Commodities Exchange Act (1936)**
  - Banned manipulation of commodity futures prices
  - Required brokers handling customer orders to be registered with the federal government
  - Required futures trading activities and commodity options to be traded on organized exchanges

- **Commodity Futures Trading Commission Act (1974)**
  - Established a five member federal commission (Commodity Futures Trading Commission – CFTC)
  - CFTC given the power to close markets and fix prices in market emergencies.

- **Commodities Futures Modernization Act of 2000**
  - Regulation of over-the-counter derivatives (off-exchange derivative contracts)
  - Clarified the law so OTC derivative transactions between “sophisticated parties” would not be regulated as “futures” under CEA or as “securities” under the federal securities laws…make reference to Dodd Frank – regulation of OTC.
Documentation of Commodity Hedge Agreements / Financial Derivative Contracts

- On Exchange Contracts are standard and provided by the exchange
  - no negotiation permitted
  - bound by the exchange rules
  - no default risk but margin posting required

- Off-Exchange / Over the Counter (OTC)
  - contract between two individual entities
  - documented using a master agreement.
  - ISDA Master Agreement – most common
  - interest rate swaps

International Swaps & Derivatives Association

- A group formed in 1984 to address the lack of uniformity in OTC derivatives contracts.
- Drafted the ISDA Master Agreement and other agreements and users’ guides for OTC derivatives users.
- Master Agreement has been available for use since 1987 and revised in 1992 (most common form) and 2002.
- Wide acceptance as the industry standard agreement.
- Broad product coverage, as evidenced by the variety of published definitions.
The ISDA Master Agreement

- A “Master” agreement
- General terms/conditions and representations
- Early termination provisions due to default or other events (fault and no fault)
- Calculation provisions for settlement of amounts due between the parties upon termination (liquidation etc.)
- Standard boilerplate contract provisions
- Schedule is used to make changes to the standard provisions.
ISDA Master Agreement

Section 1
- Interpretive priority if inconsistency in terms: Confirmation/Schedule/Master Agreement
- Single Agreement (Master + all Confirmations = the Agreement)
  - Purpose is the reduction of risk (avoidance of cherry-picking) in the event of counterparty insolvency.

Section 2
- Conditions precedent to payment or delivery - no Event of Default or Potential Event of Default
- Payment Netting: provides for the netting of two payments made in same currency on same date for same transaction
- Default Interest: Interest is required to be paid on overdue payments and specified.

Section 3 – Representations
- Facilitate due diligence and establish the factual understandings of the parties to the Agreement. If a misrepresentation is made, it could lead to an Event of Default
  - Basic: Status, powers, no conflict with laws, existence of necessary consents, obligations binding
  - Absence of Certain Events: No Event of Default, Potential Event of Default or Termination Event
  - Absence of Litigation

Section 4 – Agreements
- Furnish specified information: agree to deliver all documents requested in the Schedule
- Maintain authorizations: agree to maintain all necessary government consents
- Comply with laws
ISDA Master Agreement

Section 5 – Events of Default (culpability by Defaulting Party)
- Failure to pay or deliver (3 Business Day grace period)
- Breach of agreement (30 days after notice of failure grace period)
- Credit Support default
- Misrepresentation
- Cross default
- Bankruptcy
- Merger without assumption

Section 5 – Termination Events
- Illegality
- Tax event / Tax event upon merger
- Credit Event Upon Merger
- Additional Termination Event (as specified in the Schedule; example - Material Adverse Change)

Section 6 – Early Termination
- Provisions regarding exercise of right to terminate, effect of termination, calculations & payments

- Right to terminate following Event of Default:
  - Non-defaulting Party gives notice to the Defaulting Party of the default and designates an Early Termination Date (ETD), such date not to be more than 20 days after notice.

- Right to terminate following Termination Event:
  - Affected Party gives notice to the other party of the nature of the Termination Event. The parties discuss for up to 30 days how to avoid the Termination Event. If unavoidable, the Affected Party designates an ETD, such date not to be more than 20 days after notice.
ISDA Master Agreement

- **Section 6 - Early Termination Payment**
  - Method for calculation of payment upon early termination (Settlement Amount)
    - Parties elect Market Quotation or Loss
      - Market – amount based on quotations from reference market-makers
      - Loss – actual amount of losses and costs (or gains)
    - Parties elect First or Second Method
      - First Method is limited two-way payments. The non-Defaulting Party does not pay if it is out of the money on a net basis
      - Second Method is full two-way payments. The non-Defaulting Party does have to pay if it is out of the money on a net basis.
  - Components of the Early Termination Payment:
    - Settlement Amount plus Unpaid Amounts (owed to the determining party) minus Unpaid Amounts (owed by the determining party)

- **Section 7 – Transfer**
  - Neither party may transfer without prior written consent of the other party, unless transfer made pursuant to consolidation or amalgamation, merger with or into, transfer of all or substantially all assets. Party may assign receivables due from a Defaulting Party

- **Section 13 – Governing Law and Jurisdiction**
  - Governing Law is specified in the Schedule. Typically specifies New York law.
  - Non-exclusive jurisdiction of New York courts.
Katie Murphy Experience

- **Commercial Transactions Practice:** Over fifteen years of experience in complex commercial transactions. Review, draft, and negotiate commodity purchase, sale, transportation, and storage agreements for various commodities including grain, ingredients, fertilizer, sugar, natural gas, chemicals, power, and ethanol. Review, draft and negotiate financial derivative contracts.

- **Regulatory Practice:** Able to address a wide range of a commodity organization’s regulatory issues including matters involving OSHA, EPA, FRA, CFTC, and compliance with the FCPA.

- **Compliance Practice:** Served as Chief Ethics and Compliance Officer of an international commodity company. Designed an ethics and compliance governance and organizational structure; maintained compliance risk assessments; maintaining risk-based policies and procedures; designed a risk-based ethics and compliance training program.

- **Corporate Governance Practice:** Eight years of experience as Corporate Secretary of an international commodity company. Experience includes the drafting of board resolutions and committee charters; entity creation and maintenance; secretary to the Board of Directors and Board Committees.