PREFACE

This supplement to the April 2011 OMR is designed as a reference document for member governments and subscribers. It forms part of an ongoing work programme examining the mechanics of oil price formation and the interactions between the physical and paper markets. Further research will be forthcoming in the OMR, the MTOGM and in the form of stand-alone papers in months to come. The work programme is being supported by contributions from member governments, most notably those from Japan and Germany. We are grateful for that support. Further impetus for this work comes from the joint work programme the IEA is undertaking alongside the IEF and OPEC secretariats, as requested by IEF, G8 and G20 Ministers.

The work is overseen by David Fyfe, and the supplement’s main author is Bahattin Buyuksahin, to whom all enquiries should be addressed.
# TABLE OF CONTENTS

1. **INTRODUCTION TO DERIVATIVES** ................................................................................................... 4  
   1.1 Basics of Derivatives ....................................................................................................................... 5  
   1.2 Types of Derivatives .......................................................................................................................... 6  
   1.3 History of Derivatives Markets ........................................................................................................ 6  
   1.4 The Markets ....................................................................................................................................... 7  
   1.5 Types of Market Participants in Derivatives Markets ................................................................ 8  
      1.5.1 Hedgers ...................................................................................................................................... 8  
      1.5.2 Speculators .................................................................................................................................. 9  
      1.5.3 Swap Dealers and Commodity Index Traders ....................................................................... 10  

2. **FORWARDS AND FUTURES** ............................................................................................................. 12  
   2.1 Forward Contracts ............................................................................................................................ 12  
   2.2 Futures ............................................................................................................................................. 14  
      2.2.1 Contract Specifications ............................................................................................................... 15  
      Box 1: Grade and Quality Specifications of WTI Contract ........................................................... 16  
      2.2.2 The Clearinghouse Margins ....................................................................................................... 17  
      2.2.3 Settlement Price, Volume and Open Interest in Futures Markets ....................................... 19  
      2.2.4 Types of Orders ........................................................................................................................... 20  
   2.3 Hedging Using Futures Contracts ................................................................................................... 20  
   2.4 Basis Risk .......................................................................................................................................... 22  

3. **SWAPS** ................................................................................................................................................. 23  
   3.1 Mechanics of Swaps .......................................................................................................................... 26  

4. **OPTIONS** ............................................................................................................................................ 28  
   4.1 Call Option ....................................................................................................................................... 29  
   4.2 Put Option ....................................................................................................................................... 32  
   4.3 “Moneyness” of Options ................................................................................................................... 33  
   4.4 Hedging Using Options .................................................................................................................... 34  

5. **REFERENCES** ..................................................................................................................................... 35  

6. **GLOSSARY OF THE DERIVATIVES MARKET TERMS** ................................................................. 36
1. INTRODUCTION TO DERIVATIVES

In the last thirty years, the world of finance and capital markets has experienced a quite spectacular transformation in the derivatives markets. Futures, options and swaps, as well as other structured financial products, are now actively traded on many exchanges and over-the-counter (OTC) markets throughout the world, not only by professional traders but also by retail investors, whose interest in these derivatives has increased.

Derivatives are financial instruments whose returns are derived from those of another financial instrument. As opposed to spot (cash) markets, where the sale is made, the payment is remitted, and the good or security is delivered immediately or shortly thereafter, derivatives are markets for contractual instruments whose performance depends on the performance of another instrument, the so-called underlying instrument. For example, a crude oil futures is a derivative whose value depends on the price of crude oil.

Derivatives contracts play a very important role in managing the risk of underlying securities such as commodities, bonds, equities and equity indices, currencies, interest rates or liability positions. Commodity derivatives are traded in agricultural products (corn, wheat, soybeans, soybean oil), livestock (live cattle, pork bellies, lean hogs); precious metals (gold, silver, platinum, palladium); industrial metals (copper, zinc, aluminum, tin, nickel); soft commodities (cotton, sugar, coffee, cocoa); forest products (lumber and pulp); and energy products (crude oil, natural gas, gasoline, heating oil, electricity). Financial derivatives, where in many cases no delivery of the physical security is involved, are traded on stocks and stock indices (single stocks, S&P 500, Dow Jones Industrials); government bonds (US Treasury bonds, US Treasury notes); interest rates (EuroDollars) and foreign exchanges (Euro, Japanese Yen, Canadian Dollar). In recent years, new derivatives instruments have been devised, which are different from the more traditional instruments, as the underlying asset of these derivatives is no longer necessarily a liquid, marketable good. For example, derivatives trading has begun on weather and credit risk.

The derivatives market as a whole, and over-the-counter markets in particular, has recently attracted more attention after the onset of the financial crisis in 2008. In this report, we will look at the main building blocks of derivatives markets, including forwards, futures, swaps and options markets.
1.1 Basics of Derivatives

Derivatives contracts get their name from the fact that they are “derived from” some other “underlying” claim, contract, or asset. For instance, a crude oil forward contract is “derived from” the underlying physical asset—crude oil. Derivatives are also called “contingent claims.” This term reflects the fact that their payoff—the cash flow—is contingent upon the price of something else. Going back to the crude oil forward contract example, the payoff to a crude oil forward contract is contingent upon the price of crude oil at the expiration of the contract.

Hedgers, speculators and arbitrageurs use derivatives instruments for different purposes. Hedgers use derivatives to eliminate uncertainty by transferring the risk they face from potential future movement in prices of the underlying asset. In this regard, derivatives serve as an insurance or risk management tool against unforeseen price movements. Speculators, on the other hand, use these instruments to make profits by betting on the future direction of market prices of the underlying asset. Therefore, derivatives can be used as an alternative to investing directly in the asset without buying and holding the asset itself. Arbitrageurs use derivatives to take offsetting positions in two or more instruments to lock in a profit.

In addition to risk management, derivatives markets play a very useful economic role in price discovery. Price discovery is the process of which market participants (buyers and sellers) uncover an asset’s full information or permanent value, and then disseminate those prices as information throughout the market and the economy as a whole. Thus, market prices are important not only for those buying and selling the asset or commodity but also for the rest of the global market’s participants (consumers or producers) who are affected by the price level.

In summary, two of the most important functions of derivatives markets are the transfer of risk and price discovery. In a well-functioning futures market, hedgers, who are trying to reduce their exposure to price risk, will trade with someone, generally a speculator, who is willing to accept that risk by taking opposing positions. By taking the opposing positions, these traders facilitate the needs of hedgers to mitigate their price risk, while also adding to overall trading volume, which contributes to the formation of liquid and well-functioning markets.
1.2 Types of Derivatives

There are four major types of derivatives instruments. In some respects, these may be regarded as building blocks and can be categorised as follows:

- Forwards
- Futures
- Swaps
- Options

Each instrument has its own characteristics, which offers advantages in using them, but also brings disadvantages, which are discussed later in the text.

1.3 History of Derivatives Markets

Although derivatives are frequently considered to be something new and exotic, they have been around for millennia. There are examples of derivative contracts in Aristotle’s works and the Bible. It is true, however, that the use of financial derivatives has been growing since 1980s.

The origins of derivatives trading dates back to 2000 B.C. when merchants, in what is now called Bahrain in the Middle East, made consignment transactions for goods to be sold in India. Derivatives contracts, dating back to the same era, have also been found written on clay tablets from Mesopotamia, when farmers borrowed barley from the King’s daughter by promising to return it at harvest time. This trade can either be considered as a commodity loan or as a short-selling operation. It is a commodity loan because farmers borrowed barley in order to use it for planting the crop and they promised to return it after harvesting. Of course, it is a short-selling trade since farmers do not have any barley at the time of contract agreement.¹

A more literary reference comes some 2 350 years ago from Aristotle, who discussed a case of manipulation call option style investment on olive oil presses. In Politics, Aristotle told the story of a trader, who buys exclusive right to use olive oil presses in the upcoming harvest from the owners of this equipment. The trader paid some down payment for this right. During the harvesting season, the demand for olive oil presses rose as predicted by the trader and he sold his right to use this equipment to other parties. In the meantime, the trader made a profit without actually being in the olive oil production business. The trader’s trade carried only his down-payment (option premium) as a risk; on the other hand, owners of olive oil presses transferred some of the risks associated with the possibility of a bad crop season to the trader.

Derivatives trading in an exchange environment and with trading rules can be traced back to Venice in the 12th century. Forward and options contracts were traded on commodities, shipments and securities in Amsterdam after 1595. The first standardised futures contract can be traced to the Yodoya rice market in Osoka, Japan around 1700. In the US, forward and futures contracts of agricultural products such as wheat and corn have been formally traded on the Chicago Board of Trade\(^2\) (CBOT) since 1848. The CBOT initially offered forward contracts on agricultural commodities. In 1865, the first standardised futures contracts were introduced on the CBOT floor. The Chicago Mercantile Exchange (CME) was established in 1919 to offer futures contracts on livestocks and agricultural products. The CME has increased the number of contracts listings over time and is now best known worldwide for its financial products, including its flagship Eurodollar contract.

### 1.4 The Markets

There are basically two types of markets in which derivatives contracts trade. These are exchange traded markets and over-the-counter (OTC) markets. Regulated exchanges, since their inception in the mid-1800s until recently, have been the main venue on which producers and large-scale consumers of commodities hedge their risk against fluctuations in market prices, while allowing speculators to make profits by anticipating these fluctuations. Exchange-traded derivatives are fully standardised and their contract terms are designed by derivatives exchanges.

However, due to standardisation and fixed contract specifications in exchange-traded contracts, financial institutions began to develop non-exchange-traded (or over-the-counter, OTC) derivatives contracts. Instruments in the OTC markets are generally privately negotiated between market makers (or so-called swap dealers) and their clients. Unlike exchange traded products, OTC instruments can be customised to fit clients’ needs. These instruments, like standardised futures contracts, can be used by hedgers to hedge their exposure to the physical asset itself, or by speculators to make speculative profits if prices of the underlying asset move in an expected direction.

According to the latest Bank of International Settlements (BIS) survey, the total notional value of all OTC derivatives reached $583 trillion at end-June 2010, of which $2.85 trillion (0.5%) was in commodity-related derivatives. At their peak in end-June 2008, the total notional value of commodity-related derivatives had reached $13 trillion, or 2% of the total market. The total notional value of all exchange-traded derivatives contracts exceeded $90 trillion at that time.

\(^2\) CBOT merged with CME in 2007.
1. Introduction to Derivatives International Energy Agency - The Mechanics of the Derivatives Markets

1.5 Types of Market Participants in Derivatives Markets

Trading participants in derivatives markets can be placed into three basic categories as we mentioned earlier: (1) hedgers (2) speculators and (3) arbitrageurs. In addition to these three broad categories, swap dealers and commodity index traders are important types of market participants and have been centre-stage during the recent debate on financial regulations. We discuss swap dealers and their business in details in Section 3.

1.5.1 Hedgers

Hedgers use derivatives markets to offset the risk of prices moving unfavourably for their ongoing business activities. Hedgers, including both producers (oil producers, farmers, refiners, etc) and consumers (airlines, refiners, etc), hold positions in both the underlying commodity and in the futures (or options) contracts on that commodity. A long futures hedge is appropriate when you know you will purchase an asset in the future and want to lock in the price. A short futures hedge is appropriate when you know you will sell an asset in the future and want to lock in the price. By hedging away risks that you do not want to take, you can take on more risks that you want to take while maintaining desired/target aggregate risk levels.

For example, an oil producer can hedge against declines in oil price by selling an oil futures contract (taking a short position) on the exchange in light of its oil position, which is naturally long, in the physical market. If the price of oil increases over time, the profits from the actual sale of oil are offset by losses from holding the futures contract. On the other hand, if prices decline over time, oil producers can offset their losses from the actual sale of oil from selling their short position in the futures market. Basically, whatever happens to prices, hedgers are guaranteed to have constant profit.
Hedgers, who hold short positions in the physical market, take long positions in the paper market to limit the risk associated with fluctuations in underlying asset prices. For example, an airline company can hedge against a rise in oil prices by buying oil futures contracts (taking a long position) on the exchange for the oil required to operate its business activities (the airline company position is short in the physical market).

Some hedgers might be both producers and consumers in some related commodities. For example, refiners use crude oil to produce petroleum products. Crude oil is refined to make petroleum products, in particular heating oil and gasoline. The split of oil into its different components is frequently achieved by a process known as “cracking”, hence the difference in price between crude oil and equivalent amounts of heating oil and gasoline is called a crack spread. Therefore, refiners can take positions in crack spreads.3

1.5.2 Speculators

Speculators, on the other hand, use derivatives to seek profits by betting on the future direction of market prices of the underlying asset. Hedge funds, financial institutions, commodity trading advisors, commodity pool operators, associate brokers, introducing brokers, floor brokers and traders are all considered to be speculators. In the CFTC’s Commitment of Traders report, hedge funds, commodity pool operators, commodity trading advisors and associate persons constitute managed money traders. Speculators use derivatives instruments to make profits by betting on the future direction of market prices of the underlying asset. Traditional speculators can be differentiated based upon the time horizons during which they operate. Scalpers, or market makers, operate at the shortest time horizon – sometimes trading within a single second. These traders typically do not trade with a view as to where prices are going, but rather ‘make markets’ by standing ready to buy or sell at a moment’s notice. The goal of a market maker is to buy contracts at a slightly lower price than the current market price and sell

3 The following discussion of crack spread contracts comes from the Energy Information Administration publication Derivatives and Risk Management in the Petroleum, Natural Gas, and Electricity Industries.

“Refiners’ profits are tied directly to the spread, or difference, between the price of crude oil and the prices of refined products. Because refiners can reliably predict their costs other than crude oil, the spread is their major uncertainty. One way in which a refiner could ensure a given spread would be to buy crude oil futures and sell product futures. Another would be to buy crude oil call options and sell product put options. Both of those strategies are complex, however, and they require the hedger to tie up funds in margin accounts. To ease this burden, NYMEX in 1994 launched the crack spread contract. NYMEX treats crack spread purchases or sales of multiple futures as a single trade for the purposes of establishing margin requirements. The crack spread contract helps refiners to lock-in a crude oil price and heating oil and unleaded gasoline prices simultaneously in order to establish a fixed refining margin. One type of crack spread contract bundles the purchase of three crude oil futures (30 000 barrels) with the sale a month later of two unleaded gasoline futures (20 000 barrels) and one heating oil future (10 000 barrels). The 3-2-1 ratio approximates the real-world ratio of refinery output—2 barrels of unleaded gasoline and 1 barrel of heating oil from 3 barrels of crude oil. Buyers and sellers concern themselves only with the margin requirements for the crack spread contract. They do not deal with individual margins for the underlying trades. An average 3-2-1 ratio based on sweet crude is not appropriate for all refiners, however, and the OTC market provides contracts that better reflect the situation of individual refineries. Some refineries specialize in heavy crude oils, while others specialize in gasoline. One thing OTC traders can attempt is to aggregate individual refineries so that the trader’s portfolio is close to the exchange ratios. Traders can also devise swaps that are based on the differences between their clients’ situations and the exchange standards.”
them at a slightly higher price, perhaps at only a fraction of a cent profit on each contract. Skilled market makers can profit by trading hundreds or even thousands of contracts a day. Market makers provide immediacy to the market. Without a market maker, another market participant would likely have to wait longer until the arrival of a counterparty with an opposite trading interest.

Other types of speculators take longer-term positions based on their view of where prices may be headed. “Day traders” establish positions based on their views of where prices might be moving within minutes or hours, while “trend followers” take positions based on price expectations over a period of days, weeks or months. These speculators can also provide liquidity to hedgers in futures markets. Through their efforts to gather information on underlying commodities, the activity of these traders serves to bring information to the markets and aid in price discovery.

1.5.3 Swap Dealers and Commodity Index Traders

Instruments in the OTC markets are generally privately negotiated between market makers (or so-called swap dealers) and their client. The party offering the swap, or swap dealer, takes on any price risks associated with the swap and thus must manage the risk of the commodity exposure. The counterparties to swap dealers are generally hedgers, speculators or commodity index traders.

Investor interest in commodities, including oil, has risen quite dramatically over the last decade and commodities have become a new asset class in institutional investors’ portfolio. Partly, this development is due to diversification benefits. In addition, the development of new investment vehicles, such as exchange-traded funds, has allowed individual investors to get exposure to movements in commodity prices. Due to the storage and trading costs associated with direct physical investment in commodities, the main vehicle used by investors to gain exposure to commodities is via commodity indices (baskets of short-maturity commodity futures contracts that are periodically rolled as they approach expiry), exchange-traded funds or other structured products. These instruments provide generally long-only exposure to commodities. The vast majority of commodity index trading by principals is conducted off-exchange using swap contracts.

The main goal of commodity index funds is to track the movement of commodity prices. There exist several major commodity indices as well as sub-indices. Standard and Poors’ GSCI (formerly the Goldman Sachs Commodity Index) is the oldest and most widely tracked index in the market. The S&P GCSI, first
created in 1991, covers 24 commodities but is heavily tilted toward energy because its weights reflect world production figures. For example, in 2010, energy markets received almost 72% weight.

Investors are exposed to three sources of returns in total-return commodity index investments. The first type is the yield on the underlying commodity futures. The second type is the roll return, which is generated from the rolling of nearby futures into first deferred contracts. Depending on whether the forward curve is in contango (when longer-dated futures prices are higher than nearby contracts) or, conversely, in backwardation (when nearby prices are higher than longer-dated futures prices), the roll yield is either negative (in contango) or positive (in backwardation). The third type is the T-bill return, which is the return on collateral. Historically, the roll return has constituted the largest contributor in total return. However, the roll return component has been negative since 2005 for the S&P GSCI Total Return Index due to the contango market we observe in crude oil futures markets.

Institutional investors generally gain exposure to commodity prices through their investment in a fund that tracks a popular commodity index. The fund managers themselves either directly offset their resulting short positions by going long in futures markets or by entering swap agreements with a swap dealer. In turn, swap dealers in the OTC market generally go long or short in the futures market to offset their net long (or short) position. Of course, the client base of swap dealers also includes traditional hedgers.
2. FORWARDS AND FUTURES

2.1 Forward Contracts

A forward contract is an OTC agreement between two parties to exchange an underlying asset:

- for an agreed upon price (the forward price or the delivery price)
- at a given point in time in the future (the expiry date or maturity date)

Since it is traded between two parties in the over-the-counter market, there is a small possibility that either side can default on the contract. Therefore, forward contracts are mainly between big institutions or between a financial institution and one of their clients. Forward contracts are most popular in currency and interest rates markets.

The party that has agreed to buy the underlying asset has a long position. The party that has agreed to sell the underlying asset has a short position. By signing a forward contract, one can lock in a price \textit{ex ante} for buying or selling a security. \textit{Ex post}, whether one gains or loses from signing the contract depends on the spot price at expiry. If the price of the underlying asset rises, then the party who has a long position in the contract gains while the party who has a short position loses.

**Example 1: A commodity contract**

Trader A agrees to sell to Trader B one million barrels of WTI crude oil at the price of $100/bbl with delivery in six months. In this forward contract, WTI crude oil is the underlying asset. Trader A is said to be short the contract, since he must deliver oil in six months. Trader B is said to be long the contract, since he receives the delivery of oil in six months.

If at the end of six months the price of oil is at $110, then the trader with a long position has a profit of $10\,000\,000 and the trader with a short position loses $10\,000\,000. On the other hand, if the price of oil is $95 at the end of six months, then the trader with a long position loses $5\,000\,000 and the one with a short position has a profit of $5\,000\,000.

**Example 2: A foreign exchange contract**

On 18 February 2011, Party A signs a forward contract with Party B to sell one million British pounds (GBP) at $1.6190 per GBP six months later.

- Today (18 February 2011), sign a contract, shake hands. No money changes hands.
- Party A entered a short position and Party B entered a long position on GBP.
- But since it is on exchange rates, we can also say: Party A entered a long position and Party B entered a short position on USD.
- 18 August 2011 (the expiry date), Party A pays one million GBP to Party B, and receives 1.6190 million USD from Party B in return.
- Currently (18 February, the spot price for the pound (the spot exchange rate) is 1.6234. Six months later (18 August 2011), the exchange rate can be anything (unknown).
- $1.6190 per GBP is the forward price.

The forward price for a contract is the delivery price that would be applicable to the contract if it were negotiated today. It is the delivery price that would make the contract worth exactly zero.

In the previous example, Party A agrees to sell one million pounds at $1.6190 per GBP at expiry. If the spot price is $1.61 at expiry, what is the profit and loss (P&L) for party A?
- On 18 August 2011, Party A can buy one million GBP from the market at the spot price of $1.61 and sell it to Party B per forward contract agreement at $1.6190.
- The net P&L at expiry is the difference between the strike price (K = 1.6190) and the spot price (S_T = 1.61), multiplied by the notional value (one million). Hence, the profit is $9 000.

The primary use of a forward contract is to lock in the price at which one buys or sells a particular good in the future. This implies that the contract can be utilised to manage price risk. Forward contracts can be used to hedge against unforeseen movement in market prices. Consider an airline company which is going to buy 100 000 barrels of oil one year from today. Suppose that forward price for delivery in one year is $100/bbl. Suppose that the yield on a one-year and zero-coupon bond is 5%. The airline company can use a forward contract to guarantee the cost of buying oil for the next year. The present value of this cost will be 100/1.05=95.24. The airline company could invest this amount to buy oil in one year or it could pay an oil supplier $100 at the delivery of the oil. If the spot price at the end of one year is above the agreed forward price, the airline company gains from this hedging. If the spot price at maturity is below the forward price, it would lead to the airline company to pay more than the market price of oil. Regardless of the spot price at the delivery, the airline company protects itself from potential loss and eliminates uncertainty regarding price movements.
2.2 Futures

Like a forward contract, a futures contract is a binding agreement between a seller and a buyer to make (seller) and to take (buyer) delivery of the underlying commodity (or financial instrument) at a specified future date with agreed upon payment terms. Unlike forward contracts:

- Futures contracts are standardised and exchange-traded.
- Default risk is borne by the exchange clearinghouse.
- Traders are allowed to reverse ('offset') their positions, so that physical delivery is rare (futures can be used to trade in the risk, not the commodity). This is true because most hedgers are not dealing in the commodity deliverable against the futures contract. For instance, an airline company is not going to use WTI crude oil in Cushing, Oklohoma, for its operation, but may use the WTI futures contract as a hedge. That is, most hedgers are “cross hedgers”. Similarly, speculators are just betting on price movement, and have no interest in owning the physical oil. Therefore, most hedgers and speculators reverse their position prior to delivery.
- Value is marked to market daily.
- Different execution details also lead to pricing differences, e.g., effect of marking to market on interest calculation.

<table>
<thead>
<tr>
<th>FORWARDS</th>
<th>FUTURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private contracts between two parties</td>
<td>Exchange traded</td>
</tr>
<tr>
<td>Non-standard contract</td>
<td>Standard contract</td>
</tr>
<tr>
<td>Usually one specified delivery date</td>
<td>Range of delivery dates</td>
</tr>
<tr>
<td>Settled at the end of the contract</td>
<td>Settled daily</td>
</tr>
<tr>
<td>Delivery or final cash settlement usually occurs</td>
<td>Delivery is rare, usually parties offset their position before maturity</td>
</tr>
<tr>
<td>Some credit risk</td>
<td>Virtually no credit risk</td>
</tr>
</tbody>
</table>

The fact that futures contracts terms are standardised is important because it enables traders to focus their attention on one variable, namely price. Standardisation also makes it possible for traders anywhere in the world to trade in these markets and know exactly what they are trading. This is in sharp contrast to the cash forward contract market, in which changes in specifications from one contract to another might cause price changes from one transaction to another.
2.2.1 Contract Specifications

One of the main differences between forward contracts and futures contracts is the fact that futures contracts are standardised. When an exchange introduces a new contract, it has to specify in some detail the exact nature of the asset, the contract size, delivery point, delivery time, and settlement type (physical delivery or cash settlement).

The underlying asset in the futures contract can be anything, ranging from commodities to stock indices, equities, bond, foreign exchange, interest rate, and so on. However, the exchange has to specify the exact terms in identifying the contract. The financial assets in futures contracts are well defined and there is no ambiguity. However, in the case of commodities, there may be quite a variation in the quality of what is available in the marketplace. When the asset is specified, the exchange has to specify in detail grade or grades of commodity that are acceptable for delivery. For example, the Chicago Mercantile Exchange (CME) deliverable grade specification of the WTI futures contract is presented in Box 1.

Standardisation of futures contracts also requires the specification of the delivery point and the contract size (amount of asset that has to be delivered under one contract). For example, under the WTI futures contracts traded on the CME, delivery can be made F.O.B. at any pipeline or storage facility in Cushing, Oklahoma with pipeline access to TEPPCO, Cushing storage or Equilon Pipeline Company LLC Cushing storage. The contract size, on the other hand, is 1 000 US barrels (42 000 US gallons) of WTI crude oil.

Futures contracts are also standardised with respect to the delivery month. The exchange must specify the precise period during the month when delivery can be made. The exchange also specifies when trading in a particular month’s contract will begin, the last day on which trading can take place for a given contract as well as the delivery months. For example, CME WTI crude oil futures are listed nine years forward using the following listing schedule: consecutive months are listed for the current year and the next five years; in addition, the June and December contract months are listed beyond the sixth year. Additional months will be added on an annual basis after the December contract expires, so that an additional June and December contract would be added nine years forward, and the consecutive months in the sixth calendar year would be filled in.

Even though physical delivery does not occur on most contracts, delivery is important nonetheless. Delivery ties the price of the expiring futures to the price of the physical commodity at delivery. Nonetheless, cash settlement can be considered another way to tie the futures and cash markets together. In a cash-settled contract, at expiration the buyer pays the seller the difference between the fixed price established in the contract and the reference price prevailing on payment.
**Box 1: Grade and Quality Specifications of WTI Contract (Source CME)**

Light sweet crude oil meeting all of the following specifications and designations shall be deliverable in satisfaction of futures contract delivery obligations under this rule:

**(A) Domestic Crudes, (Deliverable at Par)**

- **Deliverable Crude Streams**
  - West Texas Intermediate
  - Low Sweet Mix (Scurry Snyder)
  - New Mexican Sweet
  - North Texas Sweet
  - Oklahoma Sweet
  - South Texas Sweet

Blends of these crude streams are only deliverable if such blends constitute a pipeline’s designated “common stream” shipment which meets the grade and quality specifications for domestic crude. TEPPCO Crude Pipeline, L.P.’s and Equilon Pipeline Company LLC’s Common Domestic Sweet Streams that meet quality specifications in Rule 200.12(A)(2-7) are deliverable as Domestic Crude.

- **Sulfur**: 0.42% or less by weight as determined by A.S.T.M. Standard D-4294, or its latest revision; (3) Gravity: Not less than 37 degrees API, nor more than 42 degrees API as determined by A.S.T.M. Standard D-287, or its latest revision;

- **Viscosity**: Maximum 60 Saybolt Universal Seconds at 100 degrees Fahrenheit as measured by A.S.T.M. Standard D-445 and as calculated for Saybolt Seconds by A.S.T.M. Standard D-2161;

- **Reid vapor pressure**: Less than 9.5 pounds per square inch at 100 degrees Fahrenheit, as determined by A.S.T.M. Standard D-5191-96, or its latest revision;

- **Basic Sediment**, water and other impurities: Less than 1% as determined by A.S.T.M. D-96-88 © or D-4007, or their latest revisions;

- **Pour Point**: Not to exceed 50 degrees Fahrenheit as determined by A.S.T.M. Standard D-97.

**(B) Foreign Crudes**

- **Deliverable Crude Streams**
  - **U.K.: Brent Blend** (for which seller shall be paid a 30 cent per barrel discount below the last settlement price)
  - **Nigeria: Bonny Light** (for which seller shall be paid a 15 cent per barrel premium above the last settlement price)
  - **Nigeria: Qua Iboe** (for which seller shall be paid a 15 cent per barrel premium above the last settlement price)
  - **Norway: Oseberg Blend** (for which seller shall be paid a 55 cent per barrel discount below the last settlement price)
  - **Colombia: Cusiana** (for which seller shall be paid 15 cent per barrel premium above the last settlement price)

- Each foreign crude stream must meet the following requirements for gravity and sulfur, as determined by A.S.T.M. Standards referenced in Rule 200.12(A)(2-3):

<table>
<thead>
<tr>
<th>Crude</th>
<th>Minimum Gravity</th>
<th>Maximum Sulfur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brent Blend</td>
<td>36.4 API</td>
<td>0.46%</td>
</tr>
<tr>
<td>Bonny Light</td>
<td>33.8 API</td>
<td>0.30%</td>
</tr>
<tr>
<td>Qua Iboe</td>
<td>34.5 API</td>
<td>0.30%</td>
</tr>
<tr>
<td>Oseberg Blend</td>
<td>35.4 API</td>
<td>0.30%</td>
</tr>
<tr>
<td>Cusiana</td>
<td>34.9 API</td>
<td>0.40%</td>
</tr>
</tbody>
</table>
2.2.2 The Clearinghouse Margins

Clearing is the process by which trades in futures and options are processed, guaranteed, and settled by an entity known as a clearing house. A complete clearing house acts as the central counterparty to and guarantor of all trades that it has accepted for clearing from its clearing members. The clearing house “becomes the buyer to every seller and the seller to every buyer” through a process known as “novation.” The exchange clearing house intermediates all futures transactions. The credit status of the counterparty becomes irrelevant and contracts become fungible. A transactor needs only to worry about the credit status of the clearing house.

Clearing houses have a legal relationship only with entities that they have been admitted as clearing members. That is to say, clearing houses have no legal relationship with the customers of their clearing members. Clearing members are generally institutions such as futures commission merchants and broker/dealers that have the financial, risk management, and operational capabilities to function as clearing members.

Clearing houses perform the following duties:

- Match, guarantee, and settle all trades and register positions resulting from such trades.
- Perform mark-to-market calculations of all open positions at least once a day and oversee the resulting cash flows between clearing member firms.
- Manage the risk exposure that clearing firms present to the clearing house.
- Perform the exercise and assignment of options contracts.
- Facilitate, but not guarantee, the delivery of physical commodities.
- Permit multilateral netting of positions and settlement payments.
- Assuming contracts are fungible (interchangeable), clearing houses offset positions.
- Enable clearing members to substitute the credit and risk exposure of the clearing house for the credit and risk exposure of each other.
- Maintain a package of financial safeguards that are designed to mitigate losses in the event a clearing member defaults on its obligations to the clearing house.
- In the event of such a default, meet the obligations of the defaulter by first utilising the collateral pledged to it by the defaulter.
- If such collateral is insufficient to cover the entire amount of the defaulted amount, then utilise the components of its financial safeguards package to take care of the remaining defaulted amount.
One of the key safeguards in the risk management systems of futures clearing organisations is the requirement that market participants post collateral, known as margin, to guarantee their performance on contract obligations. In contrast to the operation of credit margins in the stock market, a futures margin is not a partial payment for the position being undertaken. Instead, the futures margin is a performance bond which serves as collateral or as a “good faith” deposit given by the trader to the broker. Minimum levels for initial and maintenance margins are set by the exchange. However, futures commission merchants (FCM) have the right to demand higher margins from their customers.

In a traditional futures market, contracts are margined under a risk-based margining system, which is called SPAN. Portfolio margining systems evaluate positions as a group and determine margin requirements based on the estimates of changes in the value of the portfolio that would occur under assumed changes in market conditions. Margin requirements are set to cover the largest portfolio loss generated by a simulation exercise that includes a range of potential market conditions.

Marking to market ensures that futures contracts always have zero value; hence the clearing house does not face any risk. Marking to market takes place through margin payments. At the inception of the contract, each party pays an initial margin (typically 10% of the value contracted) to a margin account held by its broker. Initial margin may be paid in interest-bearing securities (T-bills) so there is no interest cost. If the futures price rises (falls), the longs have made a paper profit (loss) and the shorts a paper loss (profit). The broker pays losses from and receives any profits into the parties’ margin accounts on the morning following trading. Loss-making parties are required to restore their margin accounts to the required level during the course of the same day by payment of variation margins in cash; margin in excess of the required level may be withdrawn by profit-making parties.

For example, the initial margin for one WTI futures contract is $5,000 and the maintenance margin requirement is $3,750 per contract. Consider the following example. Trader X bought a 10 September 2011 delivery NYMEX crude oil futures contract. Suppose that the current price is $100 (18 February 2011). The broker will require the investor to deposit an initial margin of $50,000 in the margin account. At the end of each day, the margin account is adjusted to reflect the investor’s gain or loss. This practice is known as marking to market the account. Whenever the margin account exceeds or falls below the maintenance margin ($3,750 in our example), then the customer receives a margin call from its broker (or broker receives a margin call from the exchange). If the margin account exceeds the maintenance margin, the investor is entitled to withdraw any balance in the margin account in excess of
the initial margin and whenever it is below the maintenance level, the customer has to deposit to bring the margin account to its initial margin level. The extra funds deposited are known as a variation margin.

Basically, if there is a price decline the investor who has a long position has to deposit extra funds, so called variation margin, to bring the margin account to the initial level. On the other hand, the seller of the contract account will be credited.

In practice, there is actually a chain of margins. Traders post margins with brokers. Non-clearing brokers post margins with clearing brokers. Clearing brokers post margins with the clearinghouses. The margin posted by clearinghouse members with the clearinghouse is known as a clearing margin. However, in the case of clearinghouse member, there is an original margin but no maintenance margin.

**Table 2.2 : The following table summarises price changes and margin account.**

<table>
<thead>
<tr>
<th>Day</th>
<th>Futures Prices of WTI Crude Oil ($/bbl)</th>
<th>Daily Gain or (loss)</th>
<th>Cumulative Gain (Loss)</th>
<th>Margin Account Balance</th>
<th>Margin Call</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-Feb</td>
<td>100</td>
<td></td>
<td></td>
<td>50 000</td>
<td></td>
</tr>
<tr>
<td>21-Feb</td>
<td>99.5</td>
<td>-5 000</td>
<td>-5 000</td>
<td>45 000</td>
<td></td>
</tr>
<tr>
<td>22-Feb</td>
<td>98</td>
<td>-15 000</td>
<td>-20 000</td>
<td>30 000</td>
<td>20 000</td>
</tr>
<tr>
<td>23-Feb</td>
<td>99</td>
<td>10 000</td>
<td>-10 000</td>
<td>60 000</td>
<td></td>
</tr>
<tr>
<td>24-Feb</td>
<td>98.5</td>
<td>-5 000</td>
<td>-15 000</td>
<td>55 000</td>
<td></td>
</tr>
<tr>
<td>25-Feb</td>
<td>97</td>
<td>-15 000</td>
<td>-30 000</td>
<td>40 000</td>
<td></td>
</tr>
<tr>
<td>28-Feb</td>
<td>95</td>
<td>-20 000</td>
<td>-50 000</td>
<td>20 000</td>
<td>30 000</td>
</tr>
<tr>
<td>01-Mar</td>
<td>95</td>
<td>0</td>
<td>-50 000</td>
<td>50 000</td>
<td></td>
</tr>
<tr>
<td>02-Mar</td>
<td>99</td>
<td>40 000</td>
<td>-10 000</td>
<td>90 000</td>
<td></td>
</tr>
<tr>
<td>03-Mar</td>
<td>99</td>
<td>0</td>
<td>-10 000</td>
<td>90 000</td>
<td></td>
</tr>
<tr>
<td>04-Mar</td>
<td>100</td>
<td>10 000</td>
<td>0</td>
<td>100 000</td>
<td></td>
</tr>
</tbody>
</table>

**2.2.3 Settlement Price, Volume and Open Interest in Futures Markets**

The settlement price is the average of the prices at which the contract traded immediately before the end of trading for the day. The settlement price is very important since it is used to determine margin requirements and the following day's price limits.

Volume in futures market represents the total amount of trading activity or contracts that have changed hands in a given commodity market for a single trading day. On the other hand, open interest is the total
number of contracts outstanding that are held by market participants at the end of each day. A contract is created by a seller and buyer of contract, therefore open interest can be calculated as the sum of all the long positions (or equivalently it is the sum of all the short positions). Open interest will increase by one contract if both parties to the trade are initiating a new position (one new buyer and one new seller) and open interest will decrease by one contract if both traders are closing an existing or old position (one old buyer and one old seller). However, if one old trader is passing off his position to a new trader (one old buyer sells to one new buyer), open interest will not change.

2.2.4 Types of Orders
The simplest type of order placed with a broker is a market order. A market order is an order to buy or sell a futures contract at whatever price is obtainable at the time it is entered in the ring, pit, or other trading platform. However, there are many other types of orders. Most commonly used orders are the limit order, and the stop order or stop-loss order.

A limit order is an order in which the customer specifies a minimum sale price or maximum purchase price, as contrasted with a market order, which implies that the order should be filled as soon as possible at the market price. Thus, if the limit price is $95/bbl for one April WTI contract for an investor wanting to sell, the order will be executed only at a price of $95/bbl or more. As opposed to a market order, a limit order will not be executed unless the price reaches $95/bbl.

A stop order or stop-loss order is an order that becomes a market order when a particular price level is reached. A sell stop is placed below the market; a buy stop is placed above the market. The purpose of a stop order is to close out a position if unfavorable price movements take place.

2.3 Hedging Using Futures Contracts
Traditionally, many of the market participants in futures markets were hedgers. Hedgers use futures markets to reduce particular risks arising from fluctuations in the price of the underlying asset. Of course, it might not be possible to eliminate the risks completely due to basis risk, which we discuss later in the text. For the time being, we assume the possibility of a perfect hedge, which completely eliminates the risk. A hedge might involve taking a long position (long hedge) or a short position (short hedge) in the futures contract.

---

4 Futures contracts can be used in similar fashion for speculation purposes as well.
A long hedge is appropriate when a company knows it will have to purchase a certain asset in the future and wants to lock in a price now. For example, an airline company knows that it will require 100,000 barrel of crude oil on 1 July 2011 for its flight operations. The spot price of oil is $95/bbl, and the future price for July delivery (July is the delivery month for June contract) is $99/bbl. In order to avoid any risk associated with price change between now and July, the airline company can buy crude oil now at $95/bbl and store it until July. In this case, the airline company has to pay storage costs as well as interest costs. Alternatively, it can hedge its position by taking a long position in one hundred CME WTI June futures contracts (each contract is for delivery of 1,000 barrels of crude oil) and closing its position before the expiration by selling one hundred such contracts.

Suppose that the spot price of oil on 1 July is $102/bbl, which should be very close to the future price. The airline gains from futures contracts approximately

\[ 100,000 \times (\$102 - \$99) = \$300,000 \]

In July, the airline pays $102 \times 100,000 = $10,200,000 for the crude oil, making the net cost approximately $9,900,000. On the other hand, if the spot price in July turned out to be $90/bbl, then the airline company loses from its futures contract approximately

\[ 100,000 \times (\$99 - \$90) = \$900,000 \]

and pays $90 \times 100,000 = $9,000,000 for the crude oil in the spot market. Again here, the total net cost of the oil for the airline company would be $9,900,000. No matter what happens to the spot price in July, entering into a futures contract allows the airline company to fix its net cost to the number of oil barrels times the price per barrel. Therefore, hedging using futures contracts eliminates the uncertainty over the cost of funding.

A short hedge works in a similar way. Consider an oil producer, who wants to sell again 100,000 barrels of crude oil in July. Assume that all the above information still holds. Since the oil producer wants to sell its oil, it can hedge its cash position by taking a short position in one hundred CME WTI June contracts, which will be delivered in July. The producer again offsets its short position by going long before the expiration of contract.

Suppose that the spot price of oil on 1 July is $102/bbl, which should be very close to the futures price. The producer loses from a futures contract approximately

\[ 100,000 \times (\$102 - \$99) = \$300,000 \]
In July, the producer gets $102\times100\,000=10\,200\,000 for the crude oil, making a net revenue from its sales of approximately $9\,900\,000. On the other hand, if the spot price in July turned out to be $90/bbl, then the producer company gains from its futures contract approximately

$$100\,000\times($99-$90)=900\,000$$

and gets $90\times100\,000=9\,000\,000 for the crude oil in spot market. Again here, the total net revenue for the oil for the producer would be $9\,900\,000. No matter what happens to the spot price in July, entering into the futures contract allows the producer to fix its net revenue to the barrel of oil times the price per barrel. Therefore, hedging using futures contracts eliminates the uncertainty over the revenue.

### 2.4 Basis Risk

Up until now, we assumed that hedgers can completely eliminate risks by taking futures positions opposite to their cash positions. However, in reality it is difficult to eliminate all risks. In order to eliminate all risks associated with cash positions, the hedger must know the precise date in the future when an asset would be bought or sold. Even if the hedger knows the exact date of purchase or sale, he might have to close his/her futures position before its delivery month, i.e. there might be a mismatch between the hedge period and available delivery date. Even then, the hedger would need to find the same asset underlying the futures contract as the asset s/he is planning to buy or sell. For all these reasons, the hedger will face basis risk, which can be defined as the difference between the spot price of the asset to be hedged and the futures price of the contract used.

If the asset to be hedged and the asset underlying the futures contract are the same, then we should expect the basis risk to be zero at the expiration of the futures contract. Prior to expiration, the basis can be negative or positive. If the basis is positive, i.e. the spot price is greater than the futures price, the situation is known as *backwardation*. If, on the other hand, the basis is negative, i.e. spot price is less than the futures price, the situation is known as *contango*.

If, on the other hand, the asset to be hedged and the asset underlying the futures contract are different—a situation known as *cross hedging*—then we should expect the basis risk to be different from zero even at expiration. Sometimes, it is not possible to find futures contracts for some commodities. Consider an airline company, which is concerned about the future price of jet fuel oil, rather than crude oil. Since there is no futures contract on jet fuel oil, the airline company tries to find an asset underlying the futures contract which is highly correlated with the asset to be hedged. High correlation results in low basis risk and high hedge effectiveness.
3. SWAPS

Forward or futures contracts settle on a single date. However, many transactions occur repeatedly. For example, an airline company buys jet fuel oil on an ongoing basis. If a manager seeking to reduce risk confronts a risky payment stream, what is the easiest way to hedge this risk? You can enter into a separate forward contract for each payment you wish to hedge. However, it could be more convenient and entail lower transaction costs, if there were a single transaction that we could use to hedge a stream of payments. Swaps serve exactly this purpose.

Swaps are agreements between two companies to exchange cash flows in the future according to a prearranged formula. Swaps, therefore, may be regarded as a portfolio of forward contracts. Swaps are traded on over-the-counter derivatives markets and are most common in interest rates, currencies and commodities. They often extend much further into the future than exchange contracts. The parties to a swap set:

- the notional amount;
- the tenor or maturity of the swap;
- the payment dates;
- the floating price index; and
- the fixed price.

The following discussion on the swap market and development in the swap market excerpts from the CFTC “Commodity Swap Dealers & Index Traders with Commission Recommendations” report.5

“The first swap contracts were negotiated in 1981. In order to reduce overall funding costs for both parties, the World Bank and IBM entered into what has become known as a currency swap. The swap essentially involved a loan in Swiss francs by IBM to the World Bank and a loan in U.S. dollars by the World Bank to IBM. This structure of swapping cash flows ultimately served as the template for swaps on any number of financial assets and commodities.

Swaps serve as an effective hedging vehicle in much the same way that financial futures contracts do. For example, a typical futures contract has many of the same characteristics as a swap in that it is essentially a contract where the buyer of the contract agrees at the outset to pay a fixed price for a commodity in return for future delivery of the commodity, which will have an uncertain or floating value at the time of expiration of the contract.

The party offering the swap, typically called a swap dealer, takes on any price risks associated with the swap and thus must manage the risk of the commodity exposure. In the early development of swap markets, investment banks often served in a brokering capacity to bring together parties with opposite hedging needs. The currency swap between the World Bank and IBM, for example, was brokered by Salomon Brothers. While brokering swaps eliminates market price and credit risk to the broker, the process of matching and negotiating swaps between counterparties with opposite hedging needs could be difficult. As a result, swap brokers (who took on no market risk) evolved into swap dealers (who took the contract onto their books). As noted, when a swap dealer takes a swap onto its books, it takes on any price risks associated with the swap and thus must manage the risk of the commodity exposure. In addition, the counterparty bears a credit risk that the swap dealer may not honour its commitment. This risk can be significant in the case of a swap dealer because it is potentially entering into numerous transactions involving many counterparties, each of which exposes the swap dealer to additional credit risks.

As a result of these risks, there has been a natural tendency for financial intermediaries (e.g., commercial banks, investment banks, insurance companies) to become swap dealers. These firms typically have the capitalisation to support their creditworthiness as well as the expertise to manage the market price risks that they take on. In addition, for particular commodity classes, such as agriculture and energy, large commercial companies that have the expertise to manage market price risks have set up affiliates to specialise as swap dealers for those commodities. The utility of swap agreements as a hedging vehicle has led to significant growth in both the size and complexity of the swap market. During the early period in the development of the swap market, the majority of swap agreements involved financial assets. In fact, even today the vast majority of swaps outstanding involve either interest rates or currencies.

The OTC swap market has grown significantly because, for many financial entities, the OTC derivatives products offered by swap dealers have distinct advantages relative to futures contracts. While futures markets offer a high degree of liquidity (i.e., the ability to quickly execute trades due to the high number of participants willing to buy and sell contracts), futures contracts are more standardised, meaning that they may not meet the exact needs of a hedger. Swaps, on the other hand, offer additional flexibility since the counterparties can tailor the terms of the contract to meet specific hedging needs.
As an example of the flexibility that swaps can offer, consider again the case of an airline wanting to hedge future jet fuel purchases. Currently there is no jet fuel futures contract available to the airlines to directly hedge their price exposure. Contracts for crude oil (from which jet fuel is made) and heating oil (which is a fuel having similar chemical characteristics to jet fuel) do exist. But while these contracts can be used to hedge jet fuel, the dissimilarities between jet fuel and crude oil or heating oil mean that the airline will inevitably take on what was referred to above as basis risk. That is, the price of jet fuel and the prices of these futures contracts will not tend to move perfectly together, diminishing the utility of the hedge.

In contrast, swap dealers can offer the airline the alternative of entering into a contract that directly references the cash price for jet fuel at the specific time and location where the product is needed. By creating a customised OTC derivative product that specifically addresses the price risks faced by the airline, by taking on the administrative costs associated with managing that contract over time, and by assuming the price risks attendant to that contract, the swap dealer facilitates the airline’s risk management.

When a commercial entity uses a swap to offset its risk, the swap dealer assumes the price risk of the commodity. For example, if the swap dealer enters into a jet fuel swap with an airline, the airline agrees to periodically pay a fixed amount on the swap while the swap dealer pays a floating amount based on a cash market price. At each point in time when the payments are due, a netting of the obligations takes place and the party responsible for the larger payment pays the difference to the other party. Thus, if prices rise, the floating payment will be larger than the fixed price and the swap dealer pays the net amount to the airline. Conversely, if prices fall, the airline will be required to make a payment to the swap dealer. Recall, however, that when the airline makes a payment on the swap to the swap dealer, it means that at the same time, it is paying a lower price to acquire jet fuel in the cash market. The swap dealer, however, has no natural offsetting transaction to counterbalance the risk. That is why swap dealers will, in turn, hedge this price risk in the regulated futures markets.

Swap agreements have also become a popular vehicle for noncommercial participants, such as hedge funds, pension funds, large speculators, commodity index traders, and others with large pools of cash, to gain exposure to commodity prices. Recently, portfolio managers have sought to invest in commodities because of the lack of correlation, or even negative correlation, that commodities tend to have with traditional investments in stocks and bonds. In addition, because
of the ability to tailor transactions, swaps can represent a more efficient means by which these participants can enter the market. Hence, many of the benefits that swap agreements offer commercial hedgers also attract noncommercial interests to the swap market. Since swap dealers are willing to enter into swap contracts on either side of a market, at times they will enter into swaps that create offsetting exposures, reducing the swap dealer’s overall market price risk associated with the firm’s individual positions opposite its counterparties. Since it is unlikely, however, that a swap dealer could completely offset the market price risks associated with its swap business at all times, dealers often enter the futures markets to offset the residual market price risk. As a result of the growth of the swap market and the dealers who support the market, there has been an associated growth in the open interest of the futures markets related to the commodities for which swaps are offered, as these swap dealers attempt to lay off the residual risk of their swap book.

A more recent phenomenon in the derivatives market has been the development of commodity index funds and exchange-traded funds for commodities (ETFs) and exchange-traded notes (ETNs), which are mainly transacted through swap dealers. Both products are designed to produce a return that mimics a passive investment in a commodity or group of commodities. ETFs and ETNs are traded on securities exchanges and are backed by physical commodities or long futures positions held in a trust. Commodity index funds are funds that enter into swap contracts that track published commodity indexes such as the S&P Goldman Sachs Commodity Index or the Dow Jones AIG Commodity Index.”

3.1 Mechanics of Swaps

When two parties enter a swap contract, one party makes a payment to the other depending upon whether a price turns out to be greater or less than a reference price that is specified in the swap contract.

For example by entering into an oil swap, an oil buyer confronting a stream of uncertain oil payments can lock in a fixed price for oil over a period of time. The swap payments would be based on the fixed price for oil and a market price that varies over time.

Suppose Untied Airlines (UA) is going to buy 100,000 barrels of oil one year from today and two years from today. Suppose that the forward price for delivery in one year is $75/bbl and in two years is $90/bbl. Suppose one-year and two-year zero coupon bond yields are 5% and 5.5%. UA can use a
forward contract to guarantee the cost of buying oil for the next two years. The present value of this cost will be

\[
\frac{75}{1.05} + \frac{90}{1.055^2} = 152.29
\]

UA could invest this amount to buy oil in one and two years, or it could pay an oil supplier $152.29 who would commit to delivering one barrel in each of the next two years. This is a prepaid swap. If the payment is done after two years, this is a postpaid swap.

Typically, a swap will call equal payments in each year, or $82.28/bbl. This is the price of a two-year swap. However, any payments that have a present value of $152.29 are acceptable. In exchange, the swap counterparty delivers 100,000 barrels of crude oil each year. The notional value of the swap can be calculated by multiplying all cash flows by 100,000.

Instead of delivery, if the swap counterparties settled with cash, the oil buyer, UA, pays the swap counterparty the difference between $82.28/bbl and the spot price (if the difference is negative, the counterparty pays the buyer), and the oil buyer then buys the oil in the spot market. For example, if the spot price is $90/bbl, the swap counterparty pays the buyer

\[
\text{Spot price-swap price} = 90 - 82.28 = 7.72
\]

If the spot price is $80/bbl, then oil buyer makes a payment to the swap counterparty

\[
\text{Spot price-swap price} = 80 - 82.28 = -2.28
\]

Whatever the spot price, the net cost to the buyer is the swap price, $82.28/bbl.

Although the swap price is close to the mean of forward prices ($82.50/bbl), it is not exactly the same. Why? Suppose the swap price is $82.50/bbl, then the oil buyer would then be committing to pay more than $7.50 more than the forward price the first year and would pay $7.50 less than the forward price the second year. Thus relative to the forward curve, the buyer would have made an interest-free loan to the counterparty.

If the swap price is $82.28, then we are overpaying $7.28 in the first year and underpaying $7.72 in the second year, relative to the forward curve. The swap is equivalent to being long on the two forward contracts, coupled with an agreement to lend $7.28 to the counterparty in the first year, and receive $7.72 in second year.

The interest rate on this loan is $7.72/$7.28-1=6%. Where does 6% come from? 6% is the one year implied forward yield from year one to year two.
4. OPTIONS

An option is a contract that gives the option holder the right/optioon, but no obligation, to buy or sell a security (or a futures contract) to the option writer/seller at (or up to) a given time in the future (the expiry date or maturity date) for a pre-specified price (the strike price or exercise price, K).

The option purchaser (holder) is the person who buys a call or a put option and pays the option premium, i.e. the person who establishes a long options position. This is the party with the right, but not the obligation, under the terms of the contract.

The option writer, or grantor, is the person who sells a call or put option and receives the option premium, i.e. the person who establishes a short position. This party is obligated to perform under the terms of such an option.

A call option gives the holder the right to buy a security and a put option gives the holder the right to sell a security. Where the underlying interest is represented by a futures contract, the right to buy is actually a right to be long on a futures contract at a specified price level. Conversely, the right to sell represents the right to a short futures position at a specified price level. Options allow one to take advantage of changes in futures prices without actually having a position in the futures market.

Options can be American, European or Bermudan. American options can be exercised at any time prior to expiry. European options can only be exercised at the expiry. Bermudan option can only be exercised during the specified period.

The price at which the futures contract underlying an option can be purchased (if a call) or sold (if a put) is called the strike price or the exercise price. In the call and put definitions above, this is the predetermined price.

It is important to note that for every option buyer there is an option seller. At any time before the option expires, the option buyer can exercise the option. Since the buyer decides whether to exercise, the seller cannot make money at expiration. To take this risk, the seller is compensated by the option premium, which is agreed when the contract is signed. The option premium is determined through trading on an exchange market. Therefore, we should expect to see different option premia for different strike prices.

Effectively, the exercise of a call gives the option purchaser a long position in the underlying futures contract at the option’s strike price; the exercise of a put option gives the option purchaser a short futures position at the option’s strike price. The option buyer can also sell the option to someone else or
do nothing and let the option expire. The choice of action is left entirely up to the option buyer. The option buyer obtains this right by paying the premium to the option seller.

A call option buyer will only choose to exercise if the stock price is greater/higher than the strike price. If the stock price is less than the strike price, the investor would clearly choose not to exercise the option, and the investor only loses the option premium. On the other hand, a put option buyer will only to choose to exercise the option when the stock price is less than strike price. If the stock price is more than the strike price, the investor would clearly choose not to exercise the option and would only lose the option premium.

What about the option seller? The option seller receives the premium from the option buyer. If the option buyer exercises the option, the option seller is obligated to take the opposite futures position at the same strike price. Because of the seller’s obligation to take a futures position if the option is exercised, an option seller must post a margin and faces the possibility that the margin will be called if the market moves against his potential futures position.

### 4.1 Call Option

A call option is a contract where the buyer has the right, but not the obligation, to buy an underlying security. Since the buyer decides whether or not to buy, the seller cannot make money at expiration. To take this risk, the seller is compensated by the option premium, which is agreed when the contract is signed.

Consider a call option on the S&R index with six months to expiration and strike price of $1000 and premium of $93.81.\(^6\) And assume that the risk free rate is 2% over six months. Suppose that the index in six months is $1100. Clearly it is worthwhile to pay the $1000 strike price to acquire the index worth $1100. If on the other hand the index is $900 at expiration, it is not worthwhile paying the $1000 strike price to buy the index worth $900. In this case:

- The buyer is not obliged to buy the index and hence will only exercise the option if the payoff is positive.

\[ Purchased\ call\ payoff = max(0,S_T-K) \]

- In our example, \( K=1000 \). If \( S=1100 \) then the call payoff
  
  \[ \text{Purchased call payoff} = \max(0,1100-1000)=100 \]

- If \( S=900 \), then the call payoff is
  
  \[ \text{Purchased call payoff} = \max(0,900-1000)=0 \]

\(^6\) The discussions on call and put options draws upon McDonald (2006).
The payoff does not take into account the initial cost (option premium) of acquiring the position. For a purchased option, the premium is paid at the time the option is acquired. In computing profit at expiration, we use the future value of the premium.

\[
Purchased \text{ call profit} = \max(0, S_T - K) - \text{future value of option premium}
\]

\[
Purchased \text{ call profit} = Purchased \text{ call payoff} - \text{future value of option premium}
\]

If the index at the expiration is 1100, then profit is

\[
Purchased \text{ call profit} = \max(0, 1100 - 1000) - 93.81 \times 1.02 = $4.32
\]

- If the index at the expiration is 900, then the owner does not exercise the option. The loss will be future value of option premium. Maximum loss will be the option premium.

\[
Purchased \text{ call profit} = \max(0, 900 - 1000) - 93.81 \times 1.02 = -$95.68
\]

**The Payoff at Expiration with a Strike Price of $1000**

![Payoff Graph](image)
• The option writer (seller of option) has a short position in a call option. The writer receives the premium for the option and then has an obligation to sell the underlying security in exchange for the strike price if the option buyer exercises the option.
  ▪ The payoff and profit to a written call are just the opposite of those for a purchased call.
    
    \[
    \text{Written call payoff} = -\max(0,S_T-K) = \min(0,K-S_T)
    \]

    Written call profit = \(-\max(0,S_T-K)\)+future value of option premium

  ▪ In our example, if \(S=1100\) then the option writer payoff will be -$100 and profit will be -$4.32. If on the other hand, \(S=900\), then payoff will be 0 and profit will be the future value of premium, $95.68.
4.2 Put Option
A put option is a contract where the buyer has the right to sell, but not the obligation. Since the buyer decides whether to sell, the seller cannot make money at expiration. To take this risk, the seller is compensated by the option premium, which is agreed when the contract is signed.

Example: Put Option
Consider a put option on the S&R index with six months to expiration and strike price of $1000 and premium of $74.20. And assume that the risk free rate is 2% over six months. Suppose that the index in

\[ \text{Index Price} = 1095.68 \]

\[ \text{Index Price} = 1020 \]
The future is valuable. Clearly it is not worthwhile to sell the index worth $1100 for the strike price of $1000. If on the other hand the index is $900 at expiration, it is worthwhile selling the index for $1000.

- The buyer is not obliged to sell the index and hence will only exercise the option if the payoff is positive.

\[
Purchased \text{ put payoff} = \max(0,K-S_t)
\]

- In our example, K=1000. If S=1100 then the put payoff

\[
Purchased \text{ put payoff} = \max(0,1000-1100)=$0
\]

- If S=900, then the put payoff is

\[
Purchased \text{ put payoff} = \max(0,1000-900)=$100
\]

The payoff does not take into account the initial cost of acquiring the position. For a purchased option, the premium is paid at the time the option is acquired. In computing profit at expiration, we use the future value of the premium.

\[
Purchased \text{ put profit} = \max(0,K-S_t)\text{-future value of option premium}
\]

Purchased put profit = Purchased put payoff-future value of option premium

- If the index at the expiration is 1100, then the option buyer will not exercise his right to sell and the maximum loss will be the future value of the option premium.

\[
Purchased \text{ put profit} = \max(0,1000-1100)-74.2\times1.02=-$75.68
\]

- If the index at the expiration is 900, then the owner exercises the option i.e. sells. The profit will be

\[
Purchased \text{ put profit} = \max(0,1000-900)-74.2\times1.02=$24.32
\]

- The option writer (seller of option) has a long position in a put option. The writer receives the premium for the option and then has an obligation to buy the underlying security in exchange for the strike price if the option buyer exercises the option.

- The payoff and profit to a written put are just the opposite of those for a purchased put.

\[
Written \text{ put payoff} = -\max(0,K-S_t) = \min(0,S_t-K)
\]

Written put profit=\(-\max(0,K-S_t)\)+future value of option premium

- In our example, if S=1100 then the put buyer will not exercise the put, thus put writer earns profit, which will be option premium. If, on the other hand, S=900, then the option buyer exercises the option and the option seller (writer) will lose $24.32 (-100+$75.68).

4.3 “Moneyness” of Options

Options are generally referred to as in the money, at the money, or out of money. The “moneyness” of an option depends on the strike price (K) relative to the spot (S_t)/forward (F_t) price of the underlying asset.
An option is said to be in-the-money if the option has positive value if exercised right now:

- \( S_t > K \) for call options and \( S_t < K \) for put options. Sometimes it is also defined in terms of the forward price at the same maturity (in the money forward): \( F_t > K \) for call and \( F_t < K \) for put.
- The option has positive intrinsic value (defined as the maximum of zero and the value the option would have if it is exercised today) when in the money. The intrinsic value is \( (S_t - K)^+ \) for call, \( (K - S_t)^+ \) for put options. We can also define intrinsic value in terms of the forward price.

An option is said to be out-of-the-money when it has zero intrinsic value.

- \( S_t < K \) for call options and \( S_t > K \) for put options. Out-of-the-money forward: \( F_t < K \) for call and \( F_t > K \) for put.

An option is said to be at-the-money spot (or forward) when the strike is equal to the spot (or forward).

### 4.4 Hedging Using Options

Options can be used for hedging purposes. Consider a trader (an airline company) who thinks that oil prices are going to move substantially higher in the near future and wants some protection. In this case, the trader might buy a call option. Let us assume that it is 11 March and a July call contract with a $100 strike price is at $4 option premium. Assume that the July futures contract is currently trading at $100. If the trader decides to buy the call option, he has to pay the premium of \( 1000 \times 4 = $4000 \) per contract. By purchasing this call option, the trader has the right to buy a July futures contract at $100/bbl. The seller of the contract receives a $4000 option premium per contract and is obligated to take a short futures position at $100/bbl in the July contract if the option buyer chooses to exercise his option. Let’s say that by May the July futures price has risen to $110/bbl. The trader’s July contract has a value of at least $10 ($110-$100). The trader at this point can sell his option to someone else for $10/bbl and be out of the market. His total profit will be $6000 \( 1000 \times (10-4) \) per contract. Or alternatively, he will exercise his option and he will get one long July futures contract. The hedger in this case limited his risk of a substantial rise in prices. If, on the other hand, prices decline, the trader will not exercise his option and he will lose only the premium he paid when he signed the contract.
5. REFERENCES


http://ssrn.com/abstract=1141689
6. GLOSSARY OF THE DERIVATIVES MARKET TERMS

A

Abandon: To elect not to exercise or offset a long option position.

Accommodation Trading: Non-competitive trading entered into by a trader, usually to assist another with illegal trades.

Accumulator: A contract in which the seller agrees to deliver a specified quantity of a commodity or other asset to the buyer at a pre-determined price on a series of specified accumulation dates over a specified period of time. The contract typically has a “knock-out” price, which, if reached, will trigger the cancellation of all remaining accumulations. Moreover, the amount of the commodity to be delivered may be doubled or otherwise adjusted on those accumulation dates when the price of the asset reaches a specified price different from the knockout price.

Actuals: The physical or cash commodity, as distinguished from a futures contract. See Cash and Spot Commodity.

Agency Bond: A debt security issued by a government-sponsored enterprise such as Fannie Mae or Freddie Mac, designed to resemble a U.S. Treasury bond.

Agency Note: A debt security issued by a government-sponsored enterprise such as Fannie Mae or Freddie Mac, designed to resemble a U.S. Treasury note.

Aggregation: The principle under which all futures positions owned or controlled by one trader (or group of traders acting in concert) are combined to determine reporting status and compliance with speculative position limits.

Agricultural Trade Option Merchant: Any person that is in the business of soliciting or entering option transactions involving an enumerated agricultural commodity that are not conducted or executed on or subject to the rules of an exchange.

Algorithmic Trading: The use of computer programs for entering trading orders with the computer algorithm initiating orders or placing bids and offers.

Allowances: (1) The discounts (premiums) allowed for grades or locations of a commodity lower (higher) than the par (or basis) grade or location specified in the futures contract. See Differentials. (2) The tradable right to emit a specified amount of a pollutant under a cap and trade system.

American Option: An option that can be exercised at any time prior to or on the expiration date. See European Option.

Approved Delivery Facility: Any bank, stockyard, mill, storehouse, plant, elevator, or other depository that is authorized by an exchange for the delivery of commodities tendered on futures contracts.

---

7 Source: CFTC. This glossary is available at http://www.cftc.gov/ucm/groups/public/@educationcenter/documents/file/cftcglossary.pdf
Arbitrage: A strategy involving the simultaneous purchase and sale of identical or equivalent commodity futures contracts or other instruments across two or more markets in order to benefit from a discrepancy in their price relationship. In a theoretical efficient market, there is a lack of opportunity for profitable arbitrage. See Spread.

Arbitration: A process for settling disputes between parties that is less structured than court proceedings. The National Futures Association arbitration program provides a forum for resolving futures-related disputes between NFA members or between NFA members and customers. Other forums for customer complaints include the American Arbitration Association.

Artificial Price: A cash market or futures price that has been affected by a manipulation and is thus higher or lower than it would have been if it reflected the forces of supply and demand.

Asian Option: An exotic option whose payoff depends on the average price of the underlying asset during a specified period preceding the option expiration date.

Ask: The price level of an offer, as in bid-ask spread.

Assignable Contract: A contract that allows the holder to convey his rights to a third party. Exchange-traded contracts are not assignable.

Assignment: Designation by a clearing organization of an option writer who will be required to buy (in the case of a put) or sell (in the case of a call) the underlying futures contract or security when an option has been exercised, especially if it has been exercised early.

Associated Person (AP): An individual who solicits or accepts (other than in a clerical capacity) orders, discretionary accounts, or participation in a commodity pool, or supervises any individual so engaged, on behalf of a futures commission merchant, an introducing broker, a commodity trading advisor, a commodity pool operator, or an agricultural trade option merchant.

At-the-Market: An order to buy or sell a futures contract at whatever price is obtainable when the order reaches the trading facility. See Market Order.

At-the-Money: When an option’s strike price is the same as the current trading price of the underlying commodity, the option is at-the-money.

Auction Rate Security: A debt security, typically issued by a municipality, in which the yield is reset on each payment date via a Dutch auction.

Audit Trail: The record of trading information identifying, for example, the brokers participating in each transaction, the firms clearing the trade, the terms and time or sequence of the trade, the order receipt and execution time, and, ultimately, and when applicable, the customers involved.

Automatic Exercise: A provision in an option contract specifying that it will be exercised automatically on the expiration date if it is in-the-money by a specified amount, absent instructions to the contrary.
B

Back Months: Futures delivery months other than the spot or front month (also called deferred months).

Back Office: The department in a financial institution that processes and deals and handles delivery, settlement, and regulatory procedures.

Back pricing: Fixing the price of a commodity for which the commitment to purchase has been made in advance. The buyer can fix the price relative to any monthly or periodic delivery using the futures markets.

Back Spread: A delta-neutral ratio spread in which more options are bought than sold. A back spread will be profitable if volatility increases. See Delta.

Backwardation: Market situation in which futures prices are progressively lower in the distant delivery months. For instance, if the gold quotation for January is $960.00 per ounce and that for June is $945.00 per ounce, the backwardation for five months against January is $15.00 per ounce. (Backwardation is the opposite of contango). See Inverted Market.

Banging the Close: A manipulative or disruptive trading practice whereby a trader buys or sells a large number of futures contracts during the closing period of a futures contract (that is, the period during which the futures settlement price is determined) in order to benefit an even larger position in an option, swap, or other derivative that is cash settled based on the futures settlement price on that day.

Banker’s Acceptance: A draft or bill of exchange accepted by a bank where the accepting institution guarantees payment. Used extensively in foreign trade transactions.

Basis: The difference between the spot or cash price of a commodity and the price of the nearest futures contract for the same or a related commodity (typically calculated as cash minus futures). Basis is usually computed in relation to the futures contract next to expire and may reflect different time periods, product forms, grades, or locations.

Basis Grade: The grade of a commodity used as the standard or par grade of a futures contract.

Basis Point: The measurement of a change in the yield of a debt security. One basis point equals 1/100 of one percent.

Basis Quote: Offer or sale of a cash commodity in terms of the difference above or below a futures price (e.g., 10 cents over December corn).

Basis Risk: The risk associated with an unexpected widening or narrowing of the basis (that is, the difference between the futures price and the relevant cash price) between the time a hedge position is established and the time that it is lifted.

Basis Swap: A swap whose cash settlement price is calculated based on the basis between a futures contract (e.g., natural gas) and the spot price of the underlying commodity or a closely related commodity (e.g., natural gas at a location other than the futures delivery location) on a specified date.
Bear: One who expects a decline in prices. The opposite of a bull. A news item is considered bearish if it is expected to result in lower prices.

Bear Market: A market in which prices generally are declining over a period of months or years. Opposite of bull market.

Bear Market Rally: A temporary rise in prices during a bear market. See Correction.

Bear Spread: (1) A strategy involving the simultaneous purchase and sale of options of the same class and expiration date, but different strike prices. In a bear spread, the option that is purchased has a lower delta than the option that is bought. For example, in a call bear spread, the purchased option has a higher exercise price than the option that is sold. Also called bear vertical spread. (2) The simultaneous purchase and sale of two futures contracts in the same or related commodities with the intention of profiting from a decline in prices but at the same time limiting the potential loss if this expectation does not materialize. In agricultural products, this is accomplished by selling a nearby delivery and buying a deferred delivery.

Bear Vertical Spread: See Bear Spread.

Bermuda Option: An exotic option which can be exercised on a specified set of predetermined dates during the life of the option.

Beta (Beta Coefficient): A measure of the variability of rate of return or value of a stock or portfolio compared to that of the overall market, typically used as a measure of riskiness.

Bid: An offer to buy a specific quantity of a commodity at a stated price.

Bid-Ask Spread or Bid-Offer Spread: The difference between the bid price and the ask or offer price.

Binary Option: A type of option whose payoff is either a fixed amount or zero. For example, there could be a binary option that pays $100 if a hurricane makes landfall in Florida before a specified date and zero otherwise. Also called a digital option.

Blackboard Trading: The practice, no longer used, of buying and selling commodities by posting prices on a blackboard on a wall of a commodity exchange.

Black-Scholes Model: An option pricing model initially developed by Fischer Black and Myron Scholes for securities options and later refined by Black for options on futures.

Block Trade: A large transaction that is negotiated off an exchange’s centralized trading facility and then executed on the trading facility, as permitted under exchange rules.

Board Order: See Market-if-Touched Order.

Board of Trade: Any organized exchange or other trading facility for the trading of futures and/or option contracts.
**Bull Room:** An enterprise that often is operated out of inexpensive, low-rent quarters (hence the term “budding room”), that uses high pressure sales tactics (generally over the telephone), and possibly false or misleading information to solicit generally unsophisticated investors.

**Booking the Basis:** A forward pricing sales arrangement in which the cash price is determined either by the buyer or seller within a specified time. At that time, the previously-agreed basis is applied to the then-current futures quotation.

**Book Transfer:** A series of accounting or bookkeeping entries used to settle a series of cash market transactions.

**Box Spread:** An option position in which the owner establishes a long call and a short put at one strike price and a short call and a long put at another strike price, all of which are in the same contract month in the same commodity.

**Break:** A rapid and sharp price decline.

**Broad-Based Security Index:** Any index of securities that does not meet the legal definition of narrow-based security index.

**Broker:** A person paid a fee or commission for executing buy or sell orders for a customer. In commodity futures trading, the term may refer to: (1) Floor broker, a person who actually executes orders on the trading floor of an exchange; (2) Account executive or associated person, the person who deals with customers in the offices of futures commission merchants; or (3) the futures commission merchant.

**Broker Association:** Two or more persons with exchange trading privileges who (1) share responsibility for executing customer orders; (2) have access to each other’s unfilled customer orders as a result of common employment or other types of relationships; or (3) share profits or losses associated with their brokerage or trading activity.

**Bucketing:** Directly or indirectly taking the opposite side of a customer’s order into a broker’s own account or into an account in which a broker has an interest, without open and competitive execution of the order on an exchange. Also called **trading against**.

**Bucket Shop:** A brokerage enterprise that “books” (i.e., takes the opposite side of) retail customer orders without actually having them executed on an exchange.

**Bull:** One who expects a rise in prices. The opposite of a bear. A news item is considered bullish if it is expected to result in higher prices.

**Bullion:** Bars or ingots of precious metals, usually cast in standardized sizes.

**Bull Market:** A market in which prices generally are rising over a period of months or years. Opposite of a bear market.

**Bull Spread:** (1) A strategy involving the simultaneous purchase and sale of options of the same class and expiration date but different strike prices. In a bull vertical spread, the purchased option has a higher
delta than the option that is sold. For example, in a call bull spread, the purchased option has a lower exercise price than the sold option. Also called bull vertical spread. (2) The simultaneous purchase and sale of two futures contracts in the same or related commodities with the intention of profiting from a rise in prices but at the same time limiting the potential loss if this expectation is wrong. In agricultural commodities, this is accomplished by buying the nearby delivery and selling the deferred.

**Bull Vertical Spread:** See Bull Spread.

**Bust:** To cancel a trade that was executed in error.

**Buoyant:** A market in which prices have a tendency to rise easily with a considerable show of strength.

**Bunched Order:** A discretionary order entered on behalf of multiple customers.

**Bust:** An executed trade cancelled by an exchange that is considered to have been executed in error.

**Butterfly Spread:** A three-legged option spread in which each leg has the same expiration date but different strike prices. For example, a butterfly spread in soybean call options might consist of one long call at a $5.50 strike price, two short calls at a $6.00 strike price, and one long call at a $6.50 strike price.

**Buyer:** A market participant who takes a long futures position or buys an option. An option buyer is also called a taker, holder, or owner.

**Buyer’s Call:** A purchase of a specified quantity of a specific grade of a commodity at a fixed number of points above or below a specified delivery month futures price with the buyer allowed a period of time to fix the price either by purchasing a futures contract for the account of the seller or telling the seller when he wishes to fix the price. See Seller’s Call.

**Buyer’s Market:** A condition of the market in which there is an abundance of goods available and hence buyers can afford to be selective and may be able to buy at less than the price that previously prevailed. See Seller’s Market.

**Buying Hedge (or Long Hedge):** Hedging transaction in which futures contracts are bought to protect against possible increases in the cost of commodities. See Hedging.

**Buy (or Sell) On Close:** To buy (or sell) at the end of the trading session within the closing price range.

**Buy (or Sell) On Opening:** To buy (or sell) at the beginning of a trading session within the open price range.

**C**

**C & F:** “Cost and Freight” paid to a point of destination and included in the price quoted; same as C.A.F.

**Calendar Spread:** (1) The purchase of one delivery month of a given futures contract and simultaneous sale of a different delivery month of the same futures contract; (2) the purchase of a put or call option and the simultaneous sale of the same type of option with typically the same strike price but a different expiration date. Also called a horizontal spread or time spread.

**Call:** (1) An option contract that gives the buyer the right but not the obligation to purchase a commodity, security, or other asset or to enter into a long futures position at a given price (the “strike
price”) prior to or on a specified expiration date; (2) a period at the opening and the close of some futures markets in which the price for each futures contract was established by auction; or (3) the requirement that a financial instrument such as a bond be returned to the issuer prior to maturity, with principal and accrued interest paid off upon return. See Buyer’s Call, Seller’s Call.

**Call Around Market:** A market, commonly used for options on futures on European exchanges, in which brokers contact each other outside of the exchange trading facility to arrange block trades.

**Call Cotton:** Cotton bought or sold on call. See Buyer’s Call, Seller’s Call.

**Called:** Another term for exercised when an option is a call. In the case of an option on a physical, the writer of a call must deliver the indicated underlying commodity when the option is exercised or called. In the case of an option on a futures contract, a futures position will be created that will require margin, unless the writer of the call has an offsetting position.

**Call Rule:** An exchange regulation under which an official bid price for a cash commodity is competitively established at the close of each day’s trading. It holds until the next opening of the exchange.

**Cap and Trade:** A market based pollution control system in which total emissions of a pollutant are capped at a specified level. Allowances (or the right to emit a specified amount of a pollutant) are issued to firms and can be bought and sold on an organized market or OTC.

**Capping:** Effecting transactions in an instrument underlying an option shortly before the option’s expiration date to depress or prevent a rise in the price of the instrument so that previously written call options will expire worthless, thus protecting premiums previously received. See Pegging.

**Carrying Broker:** An exchange member firm, usually a futures commission merchant, through whom another broker or customer elects to clear all or part of its trades.

**Carrying Charges:** Also called **Cost of Carry.** Cost of storing a physical commodity or holding a financial instrument over a period of time. These charges include insurance, storage, and interest on the deposited funds, as well as other incidental costs. It is a carrying charge market when there are higher futures prices for each successive contract maturity. If the carrying charge is adequate to reimburse the holder, it is called “full carry.” See Negative Carry, Positive Carry, and Contango.

**Carry Trade:** A trade where one borrows a currency or commodity commodity or currency with a low cost of carry and lends a similar instrument with a high cost of carry in order to profit from the differential.

**Cascade:** A situation in which the execution of market orders or stop loss orders on an electronic trading system triggers other stop loss orders which may, in turn, trigger still more stop loss orders. This may lead to a very large price move if there are no safety mechanisms to prevent cascading.

**Cash Commodity:** The physical or actual commodity as distinguished from the futures contract, sometimes called spot commodity or actuals.

**Cash Forward Sale:** See Forward Contract.
Cash Market: The market for the cash commodity (as contrasted to a futures contract) taking the form of: (1) an organized, self-regulated central market (e.g., a commodity exchange); (2) a decentralized over-the-counter market; or (3) a local organization, such as a grain elevator or meat processor, which provides a market for a small region.

Cash Price: The price in the marketplace for actual cash or spot commodities to be delivered via customary market channels.

Cash Settlement: A method of settling futures options and other derivatives whereby the seller (or short) pays the buyer (or long) the cash value of the underlying commodity or a cash amount based on the level of an index or price according to a procedure specified in the contract. Also called Financial Settlement. Compare to physical delivery.

CCC: See Commodity Credit Corporation.

CD: See Certificate of Deposit.

CEA: Commodity Exchange Act or Commodity Exchange Authority.

Certificate of Deposit (CD): A time deposit with a specific maturity traditionally evidenced by a certificate. Large denomination CDs are typically negotiable.

CFTC: See Commodity Futures Trading Commission.

CFTC Form 40: The form used by large traders to report their futures and option positions and the purposes of those positions.

CFO: Cancel Former Order.


Certificated or Certified Stocks: Stocks of a commodity that have been inspected and found to be of a quality deliverable against futures contracts, stored at the delivery points designated as regular or acceptable for delivery by an exchange. In grain, called “stocks in deliverable position.” See Deliverable Stocks.

Changer: Formerly, a clearing member of both the Mid-America Commodity Exchange (MidAm) and another futures exchange who, for a fee, would assume the opposite side of a transaction on MidAm by taking a spread position between MidAm and the other futures exchange that traded an identical, but larger, contract. Through this service, the changer provided liquidity for MidAm and an economical mechanism for arbitrage between the two markets. MidAm was a subsidiary of the Chicago Board of Trade (CBOT). MidAm was closed by the CBOT in 2003 after MidAm’s contracts were delisted on MidAm and relisted on the CBOT as Mini contracts. The CBOT continued to use changers for former MidAm contracts traded on an open outcry platform.

Charting: The use of graphs and charts in the technical analysis of futures markets to plot trends of price movements, average movements of price, volume of trading, and open interest.
Chartist: Technical trader who reacts to signals derived from graphs of price movements.

Cheapest-to-Deliver: Usually refers to the selection of a class of bonds or notes deliverable against an expiring bond or note futures contract. The bond or note that has the highest implied repo rate is considered cheapest to deliver.

Chooser Option: An exotic option that is transacted in the present, but that at some specified future date is chosen to be either a put or a call option.

Churning: Excessive trading of a discretionary account by a person with control over the account for the purpose of generating commissions while disregarding the interests of the customer.

Circuit Breakers: A system of coordinated trading halts and/or price limits on equity markets and equity derivative markets designed to provide a cooling-off period during large, intraday market declines. The first known use of the term circuit breaker in this context was in the Report of the Presidential Task Force on Market Mechanisms (January 1988), which recommended that circuit breakers be adopted following the market break of October 1987.

C.I.F: Cost, insurance, and freight paid to a point of destination and included in the price quoted.

Class (of options): Options of the same type (i.e., either puts or calls, but not both) covering the same underlying futures contract or other asset (e.g., a March call with a strike price of 62 and a May call with a strike price of 58).

Clearing: The procedure through which the clearing organization becomes the buyer to each seller of a futures contract or other derivative, and the seller to each buyer for clearing members.

Clearing Association: See Clearing Organization.


Clearing Member: A member of a clearing organization. All trades of a non-clearing member must be processed and eventually settled through a clearing member.

Clearing Organization: An entity through which futures and other derivative transactions are cleared and settled. It is also charged with assuring the proper conduct of each contract’s delivery procedures and the adequate financing of trading. A clearing organization may be a division of a particular exchange, an adjunct or affiliate thereof, or a freestanding entity. Also called a clearing house, multilateral clearing organization, or clearing association. See Derivatives Clearing Organization.


Close: The exchange-designated period at the end of the trading session during which all transactions are considered made “at the close.” See Call.

Closing-Out: Liquidating an existing long or short futures or option position with an equal and opposite transaction. Also known as Offset.
Closing Price (or Range): The price (or price range) recorded during trading that takes place in the final period of a trading session’s activity that is officially designated as the “close.”

Co-Location: The placement of servers used by market participants in close physical proximity to an electronic trading facility's matching engine in order to facilitate high-frequency trading.

Combination: Puts and calls held either long or short with different strike prices and/or expirations. Types of combinations include straddles and strangles.

Commercial: An entity involved in the production, processing, or merchandising of a commodity.

Commercial Grain Stocks: Domestic grain in store in public and private elevators at important markets and grain afloat in vessels or barges in lake and seaboard ports.

Commercial Paper: Short-term promissory notes issued in bearer form by large corporations, with maturities ranging from 5 to 270 days. Since the notes are unsecured, the commercial paper market generally is dominated by large corporations with impeccable credit ratings.

Commission: (1) The charge made by a futures commission merchant for buying and selling futures contracts; or (2) the fee charged by a futures broker for the execution of an order. Note: when capitalized, the word Commission usually refers to the CFTC.

Commitments of Traders Report (COT): A weekly report from the CFTC providing a breakdown of each Tuesday’s open interest for markets in which 20 or more traders hold positions equal to or above the reporting levels established by the CFTC. Open interest is broken down by aggregate commercial, non-commercial, and non-reportable holdings.

Commitments: See Open Interest.

Commodity: (1) A commodity, as defined in the Commodity Exchange Act, includes the agricultural commodities enumerated in Section 1a(4) of the Commodity Exchange Act, 7 USC 1a(4), and all other goods and articles, except onions as provided in Public Law 85-839 (7 USC 13-1), a 1958 law that banned futures trading in onions, and all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in. (2) A physical commodity such as an agricultural product or a natural resource as opposed to a financial instrument such as a currency or interest rate.

Commodity Credit Corporation: A government-owned corporation established in 1933 to assist American agriculture. Major operations include price support programs, foreign sales, and export credit programs for agricultural commodities.

Commodity Exchange Act: The Commodity Exchange Act, 7 USC 1, et seq., provides for the federal regulation of commodity futures and options trading and was enacted in 1936.

Commodity Exchange Authority: A regulatory agency of the U.S. Department of Agriculture established to regulate futures trading under the 1936 Commodity Exchange Act prior to 1975. The Commodity
Exchange Authority was the predecessor of the Commodity Futures Trading Commission. Before World War II, this agency was known as the Commodity Exchange Administration.

**Commodity Exchange Commission**: A commission consisting of the Secretary of Agriculture, Secretary of Commerce, and the Attorney General, responsible for administering the Commodity Exchange Act prior to 1975. Among other things, the CEC was responsible for setting Federal speculative position limits.

**Commodity Futures Trading Commission (CFTC)**: The Federal regulatory agency established by the Commodity Futures Trading Act of 1974 to administer the Commodity Exchange Act.

**Commodity Index**: An index of a specified set of (physical) commodity prices or commodity futures prices.

**Commodity Index Fund**: An investment fund that enters into futures or commodity swap positions for the purpose of replicating the return of an index of commodity prices or commodity futures prices.

**Commodity Index Swap**: A swap whose cash flows are intended to replicate a commodity index.

**Commodity Index Trader**: An entity that conducts futures trades on behalf of a commodity index fund or to hedge commodity index swap positions.

**Commodity-Linked Bond**: A bond in which payment to the investor is dependent to a certain extent on the price level of a commodity, such as crude oil, gold, or silver, at maturity.

**Commodity Option**: An option on a commodity or a futures contract.

**Commodity Pool**: An investment trust, syndicate, or similar form of enterprise operated for the purpose of trading commodity futures or option contracts. Typically thought of as an enterprise engaged in the business of investing the collective or “pooled” funds of multiple participants in trading commodity futures or options, where participants share in profits and losses on a pro rata basis.

**Commodity Pool Operator (CPO)**: A person engaged in a business similar to an investment trust or a syndicate and who solicits or accepts funds, securities, or property for the purpose of trading commodity futures contracts or commodity options. The commodity pool operator either itself makes trading decisions on behalf of the pool or engages a commodity trading advisor to do so.

**Commodity Trading Advisor (CTA)**: A person who, for pay, regularly engages in the business of advising others as to the value of commodity futures or options or the advisability of trading in commodity futures or options, or issues analyses or reports concerning commodity futures or options.

**Commodity Swap**: A swap in which the payout to at least one counterparty is based on the price of a commodity or the level of a commodity index.

**Confirmation Statement**: A statement sent by a futures commission merchant to a customer when a futures or options position has been initiated which typically shows the price and the number of contracts bought and sold. See P&S (Purchase and Sale Statement).

**Congestion**: (1) A market situation in which shorts attempting to cover their positions are unable to find an adequate supply of contracts provided by longs willing to liquidate or by new sellers willing to enter
the market, except at sharply higher prices (see Squeeze, Corner); (2) in technical analysis, a period of
time characterized by repetitious and limited price fluctuations.

**Consignment**: A shipment made by a producer or dealer to an agent elsewhere with the understanding
that the commodities in question will be cared for or sold at the highest obtainable price. Title to the
merchandise shipped on consignment rests with the shipper until the goods are disposed of according to
agreement.

**Contango**: Market situation in which prices in succeeding delivery months are progressively higher than
in the nearest delivery month; the opposite of backwardation.

**Contract**: (1) A term of reference describing a unit of trading for a commodity future or option or other
derivative; (2) an agreement to buy or sell a specified commodity, detailing the amount and grade of the
product and the date on which the contract will mature and become deliverable.

**Contract Grades**: Those grades of a commodity that have been officially approved by an exchange as
deliverable in settlement of a futures contract.

**Contract Market**: A board of trade or exchange designated by the Commodity Futures Trading
Commission to trade futures or options under the Commodity Exchange Act. A contract market can allow
both institutional and retail participants and can list for trading futures contracts on any commodity,
provided that each contract is not readily susceptible to manipulation. Also called designated contract
market. See Derivatives Transaction Execution Facility.

**Contract Month**: See Delivery Month.

**Contract Size**: The actual amount of a commodity represented in a contract.

**Contract Unit**: See Contract Size.

**Controlled Account**: An account for which trading is directed by someone other than the owner. Also
called a Managed Account or a Discretionary Account.

**Convergence**: The tendency for prices of physicals and futures to approach one another, usually during
the delivery month. Also called a “narrowing of the basis.”

**Conversion**: A position created by selling a call option, buying a put option, and buying the underlying
instrument (for example, a futures contract), where the options have the same strike price and the same
expiration. See Reverse Conversion.

**Conversion Factors**: Numbers published by a futures exchange to determine invoice prices for debt
instruments deliverable against bond or note futures contracts. A separate conversion factor is published
for each deliverable instrument. Invoice price = Contract Size × Futures Settlement Price × Conversion
Factor + Accrued Interest.

**Core Principle**: A provision of the Commodity Exchange Act with which a contract market, derivatives
transaction execution facility, or derivatives clearing organization must comply on an ongoing basis.
There are 18 core principles for contract markets, 9 core principles for derivatives transaction execution facilities, and 14 core principles for derivatives clearing organizations.

**Corner:** (1) Securing such relative control of a commodity that its price can be manipulated, that is, can be controlled by the creator of the corner; or (2) in the extreme situation, obtaining contracts requiring the delivery of more commodities than are available for delivery. See Squeeze, Congestion.

**Corn-Hog Ratio:** See Feed Ratio.

**Correction:** A temporary decline in prices during a bull market that partially reverses the previous rally. See Bear Market Rally.

**Cost of Carry:** See Carrying Charges.

**Cost of Tender:** Total of various charges incurred when a commodity is certified and delivered on a futures contract.

**COT:** See Commitments of Traders Report.

**Counterparty:** The opposite party in a bilateral agreement, contract, or transaction, such as a swap. In the retail foreign exchange (or Forex) context, the party to which a retail customer sends its funds; lawfully, the party must be one of those listed in Section 2(c)(2)(B)(ii)(I)-(VI) of the Commodity Exchange Act.

**Counterparty Risk:** The risk associated with the financial stability of the party entered into contract with. Forward contracts impose upon each party the risk that the counterparty will default, but futures contracts executed on a designated contract market are guaranteed against default by the clearing organization.

**Counter-Trend Trading:** In technical analysis, the method by which a trader takes a position contrary to the current market direction in anticipation of a change in that direction.

**Coupon (Coupon Rate):** A fixed dollar amount of interest payable per annum, stated as a percentage of principal value, usually payable in semiannual installments.

**Cover:** (1) Purchasing futures to offset a short position (same as Short Covering); see Offset, Liquidation; (2) to have in hand the physical commodity when a short futures sale is made, or to acquire the commodity that might be deliverable on a short sale.

**Covered Option:** A short call or put option position that is covered by the sale or purchase of the underlying futures contract or other underlying instrument. For example, in the case of options on futures contracts, a covered call is a short call position combined with a long futures position. A covered put is a short put position combined with a short futures position.

**Cox-Ross-Rubinstein Option Pricing Model:** An option pricing model developed by John Cox, Stephen Ross, and Mark Rubinstein that can be adopted to include effects not included in the Black-Scholes Model (e.g., early exercise and price supports).

**CPO:** See Commodity Pool Operator.
Crack Spread: (1) In energy futures, the simultaneous purchase of crude oil futures and the sale of petroleum product futures to establish a refining margin. One can trade a gasoline crack spread, a heating oil crack spread, or a 3-2-1 crack spread which consists of three crude oil futures contracts spread against two gasoline futures contracts and one heating oil futures contract. The 3-2-1 crack spread is designed to approximate the typical ratio of gasoline and heating oil that results from refining a barrel of crude oil. See Gross Processing Margin. (2) Calculation showing the theoretical market value of petroleum products that could be obtained from a barrel of crude after the oil is refined or cracked. This does not necessarily represent the refining margin because a barrel of crude yields varying amounts of petroleum products.

Credit Default Option: A put option that makes a payoff in the event the issuer of a specified reference asset defaults. Also called default option.

Credit Default Swap: A bilateral over-the-counter (OTC) contract in which the seller agrees to make a payment to the buyer in the event of a specified credit event in exchange for a fixed payment or series of fixed payments; the most common type of credit derivative; also called credit swap; similar to credit default option.

Credit Derivative: A derivative contract designed to assume or shift credit risk, that is, the risk of a credit event such as a default or bankruptcy of a borrower. For example, a lender might use a credit derivative to hedge the risk that a borrower might default or have its credit rating downgraded. Common credit derivatives include, credit default swaps, credit default options, credit spread options, downgrade options, and total return swaps.

Credit Event: An event such as a debt default or bankruptcy that will affect the payoff on a credit derivative, as defined in the derivative agreement.

Credit Rating: A rating determined by a rating agency that indicates the agency’s opinion of the likelihood that a borrower such as a corporation or sovereign nation will be able to repay its debt. The rating agencies include Standard & Poor’s, Fitch, and Moody’s.

Credit Spread: The difference between the yield on the debt securities of a particular corporate or sovereign borrower (or a class of borrowers with a specified credit rating) and the yield of similar maturity Treasury debt securities.

Credit Spread Option: An option whose payoff is based on the credit spread between the debt of a particular borrower and similar maturity Treasury debt.

Credit Swap: See Credit Default Swap.

Crop Year: The time period from one harvest to the next, varying according to the commodity (e.g., July 1 to June 30 for wheat; September 1 to August 31 for soybeans).
Cross-Hedge: Hedging a cash market position in a futures or option contract for a different but price-related commodity.

Cross-Margining: A procedure for margining related securities, options, and futures contracts jointly when different clearing organizations clear each side of the position.

Cross Rate: In foreign exchange, the price of one currency in terms of another currency in the market of a third country. For example, the exchange rate between Japanese yen and Euros would be considered a cross rate in the U.S. market.

Cross Trading: Offsetting or noncompetitive match of the buy order of one customer against the sell order of another, a practice that is permissible only when executed in accordance with the Commodity Exchange Act, CFTC rules, and rules of the exchange.

Crush Spread: In the soybean futures market, the simultaneous purchase of soybean futures and the sale of soybean meal and soybean oil futures to establish a processing margin. See Gross Processing Margin, Reverse Crush Spread.

CTA: See Commodity Trading Advisor.

CTI (Customer Type Indicator) Codes: These consist of four identifiers that describe transactions by the type of customer for which a trade is effected. The four codes are: (1) trading by a person who holds trading privileges for his or her own account or an account for which the person has discretion; (2) trading for a clearing member’s proprietary account; (3) trading for another person who holds trading privileges who is currently present on the trading floor or for an account controlled by such other person; and (4) trading for any other type of customer. Transaction data classified by the above codes is included in the trade register report produced by a clearing organization.

Curb Trading: Trading by telephone or by other means that takes place after the official market has closed and that originally took place in the street on the curb outside the market. Under the Commodity Exchange Act and CFTC rules, curb trading is illegal. Also known as kerb trading.

Currency Swap: A swap that involves the exchange of one currency (e.g., U.S. dollars) for another (e.g., Japanese yen) on a specified schedule.

Current Delivery Month: See Spot Month

D

Daily Price Limit: The maximum price advance or decline from the previous day’s settlement price permitted during one trading session, as fixed by the rules of an exchange.

Day Ahead: See Next Day.

Day Order: An order that expires automatically at the end of each day’s trading session. There may be a day order with time contingency. For example, an “off at a specific time” order is an order that remains
in force until the specified time during the session is reached. At such time, the order is automatically canceled.

**Day Trader:** A trader, often a person with exchange trading privileges, who takes positions and then offsets them during the same trading session prior to the close of trading.

**DCM:** Designated Contract Market.

**Dealer:** An individual or firm that acts as a market maker in an instrument such as a security or foreign currency.

**Dealer/Merchant (AD):** A large trader that declares itself a “Dealer/Merchant” on [CFTC Form 40](#), which provides as examples “wholesaler, exporter/importer, shipper, grain elevator operator, crude oilmarketer.”

**Deck:** The orders for purchase or sale of futures and option contracts held by a floor broker. Also referred to as an order book.

**Declaration Date:** See Expiration Date.

**Declaration (of Options):** See Exercise.

**Default:** Failure to perform on a futures contract as required by exchange rules, such as failure to meet a margin call, or to make or take delivery.

**Default Option:** See Credit Default Option.

**Deferred Futures:** See Back Months.

**Deliverable Grades:** See Contract Grades.

**Deliverable Stocks:** Stocks of commodities located in exchange-approved storage for which receipts may be used in making delivery on futures contracts. In the cotton trade, the term refers to cotton certified for delivery. Also see Certificated or Certified Stocks.

**Deliverable Supply:** The total supply of a commodity that meets the delivery specifications of a futures contract. See Economically Deliverable Supply.

**Delivery:** The tender and receipt of the actual commodity, the cash value of the commodity, or of a delivery instrument covering the commodity (e.g., warehouse receipts or shipping certificates), used to settle a futures contract. See Notice of Delivery, Delivery Notice.

**Delivery, Current:** Deliveries being made during a present month. Sometimes current delivery is used as a synonym for nearby delivery.

**Delivery Date:** The date on which the commodity or instrument of delivery must be delivered to fulfill the terms of a contract.

**Delivery Instrument:** A document used to effect delivery on a futures contract, such as a warehouse receipt or shipping certificate.
**Delivery Month:** The specified month within which a futures contract matures and can be settled by delivery or the specified month in which the delivery period begins.

**Delivery, Nearby:** The nearest traded month, the front month. In plural form, one of the nearer trading months.

**Delivery Notice:** The written notice given by the seller of his intention to make delivery against an open short futures position on a particular date. This notice, delivered through the clearing organization, is separate and distinct from the warehouse receipt or other instrument that will be used to transfer title. Also called Notice of Intent to Deliver or Notice of Delivery.

**Delivery Option:** A provision of a futures contract that provides the short with flexibility in regard to timing, location, quantity, or quality in the delivery process.

**Delivery Point:** A location designated by a commodity exchange where stocks of a commodity represented by a futures contract may be delivered in fulfillment of the contract. Also called Location.

**Delivery Price:** The price fixed by the clearing organization at which deliveries on futures are invoiced—generally the price at which the futures contract is settled when deliveries are made. Also called Invoice Price.

**Delta:** The expected change in an option’s price given a one-unit change in the price of the underlying futures contract or physical commodity. For example, an option with a delta of 0.5 would change $.50 when the underlying commodity moves $1.00.

**Delta Margining or Delta-Based Margining:** An option margining system used by some exchanges that equates the changes in option premiums with the changes in the price of the underlying futures contract to determine risk factors upon which to base the margin requirements.

**Delta Neutral:** Refers to a position involving options that is designed to have an overall delta of zero.

**Deposit:** See Initial Margin.

**Depository Receipt:** See Vault Receipt.

**Derivative:** A financial instrument, traded on or off an exchange, the price of which is directly dependent upon (i.e., “derived from”) the value of one or more underlying securities, equity indices, debt instruments, commodities, other derivative instruments, or any agreed upon pricing index or arrangement (e.g., the movement over time of the Consumer Price Index or freight rates). They are used to hedge risk or to exchange a floating rate of return for fixed rate of return. Derivatives include futures, options, and swaps. For example, futures contracts are derivatives of the physical contract and options on futures are derivatives of futures contracts.

**Derivatives Clearing Organization:** A clearing organization or similar entity that, in respect to a contract (1) enables each party to the contract to substitute, through novation or otherwise, the credit of the derivatives clearing organization for the credit of the parties; (2) arranges or provides, on a multilateral
basis, for the settlement or netting of obligations resulting from such contracts; or (3) otherwise provides clearing services or arrangements that mutualize or transfer among participants in the derivatives clearing organization the credit risk arising from such contracts.

**Derivatives Transaction Execution Facility (DTEF):** A board of trade that is registered with the CFTC as a DTEF. A DTEF is subject to fewer regulatory requirements than a contract market. To qualify as a DTEF, an exchange can only trade certain commodities (including excluded commodities and other commodities with very high levels of deliverable supply) and generally must exclude retail participants (retail participants may trade on DTEFs through futures commission merchants with adjusted net capital of at least $20 million or registered commodity trading advisors that direct trading for accounts containing total assets of at least $25 million). See Derivatives Transaction Execution Facilities.

**Designated Contract Market:** See Contract Market.

**Designated Self-Regulatory Organization (DSRO):** Self-regulatory organizations (i.e., the commodity exchanges and registered futures associations) must enforce minimum financial and reporting requirements for their members, among other responsibilities outlined in the CFTC's regulations. When a futures commission merchant (FCM) is a member of more than one SRO, the SROs may decide among themselves which of them will assume primary responsibility for these regulatory duties and, upon approval of the plan by the Commission, be appointed the “designated self-regulatory organization” for that FCM.

**Diagonal Spread:** A spread between two call options or two put options with different strike prices and different expiration dates. See Horizontal Spread, Vertical Spread.

**Differentials:** The discount (premium) allowed for grades or locations of a commodity lower (higher) than the par of basis grade or location specified in the futures contact. See Allowances.

**Digital Option:** See Binary Option.

**Directional Trading:** Trading strategies designed to speculate on the direction of the underlying market, especially in contrast to volatility trading.

**Disclosure Document:** A statement that must be provided to prospective customers that describes trading strategy, potential risk, commissions, fees, performance, and other relevant information.

**Discount:** (1) The amount a price would be reduced to purchase a commodity of lesser grade; (2) sometimes used to refer to the price differences between futures of different delivery months, as in the phrase “July at a discount to May,” indicating that the price for the July futures is lower than that of May.

**Discretionary Account:** An arrangement by which the holder of an account gives written power of attorney to someone else, often a commodity trading advisor, to buy and sell without prior approval of the holder; often referred to as a “managed account” or controlled account.

**Distillates:** A category of petroleum products that includes diesel fuels and fuel oils such as heating oil.
DRT ("Disregard Tape") or Not-Held Order: Absent any restrictions, a DRT (Not-Held Order) means any order giving the floor broker complete discretion over price and time in execution of an order, including discretion to execute all, some, or none of this order.

Distant or Deferred Months: See Back Month.

Dominant Future: That future having the largest amount of open interest.

Double Hedging: As used by the CFTC, it implies a situation where a trader holds a long position in the futures market in excess of the speculative position limit as an offset to a fixed price sale, even though the trader has an ample supply of the commodity on hand to fill all sales commitments.

DSRO: See Designated Self-Regulatory Organization.

DTEF: See Derivatives Transaction Execution Facility.

Dual Trading: Dual trading occurs when: (1) a floor broker executes customer orders and, on the same day, trades for his own account or an account in which he has an interest; or (2) a futures commission merchant carries customer accounts and also trades or permits its employees to trade in accounts in which it has a proprietary interest, also on the same trading day.

Dutch Auction: An auction of a debt instrument (such as a Treasury note) in which all successful bidders receive the same yield (the lowest yield that results in the sale of the entire amount to be issued).

Duration: A measure of a bond’s price sensitivity to changes in interest rates.

E

Ease Off: A minor and/or slow decline in the price of a market.

ECN: Electronic Communications Network, frequently used for creating electronic stock or futures markets.

Economically Deliverable Supply: That portion of the deliverable supply of a commodity that is in position for delivery against a futures contract, and is not otherwise unavailable for delivery. For example, Treasury bonds held by long-term investment funds are not considered part of the economically deliverable supply of a Treasury bond futures contract.

Efficient Market: In economic theory, an efficient market is one in which market prices adjust rapidly to reflect new information. The degree to which the market is efficient depends on the quality of information reflected in market prices. In an efficient market, profitable arbitrage opportunities do not exist and traders cannot expect to consistently outperform the market unless they have lower-cost access to information that is reflected in market prices or unless they have access to information before it is reflected in market prices. See Random Walk.

EFP: See Exchange for Physical.

EIA: See Energy Information Administration.
Electronic Trading Facility: A trading facility that operates by an electronic or telecommunications network instead of a trading floor and maintains an automated audit trail of transactions.

Eligible Commercial Entity: An eligible contract participant or other entity approved by the CFTC that has a demonstrable ability to make or take delivery of an underlying commodity of a contract; incurs risks related to the commodity; or is a dealer that regularly provides risk management, hedging services, or market-making activities to entities trading commodities or derivative agreements, contracts, or transactions in commodities.

Eligible Contract Participant: An entity, such as a financial institution, insurance company, or commodity pool, that is classified by the Commodity Exchange Act as an eligible contract participant based upon its regulated status or amount of assets. This classification permits these persons to engage in transactions (such as trading on a derivatives transaction execution facility) not generally available to non-eligible contract participants, i.e., retail customers.

Elliot Wave: (1) A theory named after Ralph Elliot, who contended that the stock market tends to move in discernible and predictable patterns reflecting the basic harmony of nature and extended by other technical analysts to futures markets; (2) in technical analysis, a charting method based on the belief that all prices act as waves, rising and falling rhythmically.

E-Local: A person with trading privileges at an exchange with an electronic trading facility who trades electronically (rather than in a pit or ring) for his or her own account, often at a trading arcade.

E-Mini: A mini contract that is traded exclusively on an electronic trading facility. E-Mini is a trademark of the Chicago Mercantile Exchange.

Emergency: Any market occurrence or circumstance which requires immediate action and threatens or may threaten such things as the fair and orderly trading in, or the liquidation of, or delivery pursuant to, any contracts on a contract market.

Energy Information Administration (EIA): An agency of the US Department of Energy that provides statistics, data, analysis on resources, supply, production, consumption for all energy sources. EIA data includes weekly inventory statistics for crude oil and petroleum products as well as weekly natural storage data.

Enumerated Agricultural Commodities: The commodities specifically listed in Section 1a(3) of the Commodity Exchange Act: wheat, cotton, rice, corn, oats, barley, rye, flaxseed, grain sorghums, mill feeds, butter, eggs, Solanum tuberosum (Irish potatoes), wool, wool tops, fats and oils (including lard, tallow, cottonseed oil, peanut oil, soybean oil, and all other fats and oils), cottonseed meal, cottonseed, peanuts, soybeans, soybean meal, livestock, livestock products, and frozen concentrated orange juice.

Equity: As used on a trading account statement, refers to the residual dollar value of a futures or option trading account, assuming it was liquidated at current prices.
ETF: See Exchange Traded Fund.

EURIBOR® (Euro Interbank Offered Rate): The euro denominated rate of interest at which banks borrow funds from other banks, in marketable size, in the interbank market. Euribor is sponsored by the European Banking Federation. See LIBOR, TIBOR.Euro: The official currency of most members of the European Union.

Eurocurrency: Certificates of Deposit (CDs), bonds, deposits, or any capital market instrument issued outside of the national boundaries of the currency in which the instrument is denominated (for example, Eurodollars, Euro-Swiss francs, or Euroyen).

Eurodollars: U.S. dollar deposits placed with banks outside the U.S. Holders may include individuals, companies, banks, and central banks.

European Option: An option that may be exercised only on the expiration date. See American Option.

Even Lot: A unit of trading in a commodity established by an exchange to which official price quotations apply. See Round Lot.

Event Market: A market in derivatives whose payoff is based on a specified event or occurrence such as the release of a macroeconomic indicator, a corporate earnings announcement, or the dollar value of damages caused by a hurricane.

Exchange: A central marketplace with established rules and regulations where buyers and sellers meet to trade futures and options contracts or securities. Exchanges include designated contract markets and derivatives transaction execution facilities.

Exchange for Physicals (EFP): A transaction in which the buyer of a cash commodity transfers to the seller a corresponding amount of long futures contracts, or receives from the seller a corresponding amount of short futures, at a price difference mutually agreed upon. In this way, the opposite hedges in futures of both parties are closed out simultaneously. Also called Exchange of Futures for Cash, AA (against actuals), or Ex-Pit transactions.

Exchange of Futures for Cash: See Exchange for Physicals.

Exchange of Futures for Swaps (EFS): A privately negotiated transaction in which a position in a physical delivery futures contract is exchanged for a cash-settled swap position in the same or a related commodity, pursuant to the rules of a futures exchange. See Exchange for Physicals.

Exchange Rate: The price of one currency stated in terms of another currency.

Exchange Risk Factor: The delta of an option as computed daily by the exchange on which it is traded.

Exchange Traded Fund (ETF): An investment vehicle holding a commodity or other asset that issues shares that are traded like a stock on a securities exchange.

Excluded Commodity: In general, the Commodity Exchange Act defines an excluded commodity as: any financial instrument such as a security, currency, interest rate, debt instrument, or credit rating; any
economic or commercial index other than a narrow-based commodity index; or any other value that is out of the control of participants and is associated with an economic consequence. See the Commodity Exchange Act definition of excluded commodity.

**Exempt Board of Trade:** A trading facility that trades commodities (other than securities or securities indexes) having a nearly inexhaustible deliverable supply and either no cash market or a cash market so liquid that any contract traded on the commodity is highly unlikely to be susceptible to manipulation. An exempt board of trade’s contracts must be entered into by parties that are eligible contract participants.

**Exempt Commercial Market:** An electronic trading facility that trades exempt commodities on a principal-to-principal basis solely between persons that are eligible commercial entities.

**Exempt Commodity:** The Commodity Exchange Act defines an exempt commodity as any commodity other than an excluded commodity or an agricultural commodity. Examples include energy commodities and metals.

**Exempt Foreign Firm:** A foreign firm that does business with U.S. customers only on foreign exchanges and is exempt from registration under CFTC regulations based upon compliance with its home country’s regulatory framework (also known as a “Rule 30.10 firm”).

**Exercise Price (Strike Price):** The price, specified in the option contract, at which the underlying futures contract, security, or commodity will move from seller to buyer.

**Exotic Options:** Any of a wide variety of options with non-standard payout structures or other features, including Asian options and lookback options. Exotic options are mostly traded in the over-the-counter market.

**Expiration Date:** The date on which an option contract automatically expires; the last day an option may be exercised.

**Extrinsic Value:** See Time Value.

**Ex-Pit:** See Transfer Trades and Exchange for Physicals

**F**

**FAB (Five Against Bond) Spread:** A futures spread trade involving the buying (selling) of a five-year Treasury note futures contract and the selling (buying) of a long-term (15-30 year) Treasury bond futures contract.

**Fannie Mae:** A corporation (government-sponsored enterprise) created by Congress to support the secondary mortgage market (formerly the Federal National Mortgage Association). It purchases and sells residential mortgages insured by the Federal Home Administration (FHA) or guaranteed by the Veteran’s Administration (VA). See Freddie Mac.

**FAN (Five Against Note) Spread:** A futures spread trade involving the buying (selling) of a five-year Treasury note futures contract and the selling (buying) of a ten-year Treasury note futures contract.
Fast Market: An open outcry market situation where transactions in the pit or ring take place in such volume and with such rapidity that price reporters fall behind with price quotations, label each quote as “FAST” and show a range of prices. Also called a fast tape.

The Federal Energy Regulatory Commission: (FERC): An independent agency of the U.S. Government that regulates the interstate transmission of natural gas, oil, and electricity. FERC also regulates natural gas and hydropower projects.

Federal Limit: A speculative position limit that is established and administered by the CFTC rather than an exchange.

Feed Ratio: The relationship of the cost of feed, expressed as a ratio to the sale price of animals, such as the corn-hog ratio. These serve as indicators of the profit margin or lack of profit in feeding animals to market weight.


FIA: See Futures Industry Association.

Fibonacci Numbers: A number sequence discovered by a thirteenth century Italian mathematician Leonardo Fibonacci (circa 1170-1250), who introduced Arabic numbers to Europe, in which the sum of any two consecutive numbers equals the next highest number—i.e., following this sequence: 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, and so on. The ratio of any number to its next highest number approaches 0.618 after the first four numbers. These numbers are used by technical analysts to determine price objectives from percentage retracements.

Fictitious Trading: Wash trading, bucketing, cross trading, or other schemes which give the appearance of trading but actually no bona fide, competitive trade has occurred.

Fill: The execution of an order.

Fill or Kill Order (FOK): An order that demands immediate execution or cancellation. Typically involving a designation, added to an order, instructing the broker to offer or bid (as the case may be) one time only; if the order is not filled immediately, it is then automatically cancelled.

Final Settlement Price: The price at which a cash-settled futures contract is settled at maturity, pursuant to a procedure specified by the exchange.

Financial: Can be used to refer to a derivative that is financially settled or cash settled. See Physical.

Financial Commodity: Any futures or option contract that is not based on an agricultural commodity or a natural resource such as energy or metals. It includes currencies, equity securities, fixed income securities, and indexes of various kinds.

Financial Future: A futures contract on a financial commodity.

Financial Settlement: See Cash settlement
First Notice Day: The first day on which notices of intent to deliver actual commodities against futures market positions can be received. First notice day may vary with each commodity and exchange.

Fix, Fixing: See Gold Fixing.

Fixed Income Security: A security whose nominal (or current dollar) yield is fixed or determined with certainty at the time of purchase, typically a debt security.

Floor Broker: A person with exchange trading privileges who, in any pit, ring, post, or other place provided by an exchange for the meeting of persons similarly engaged, executes for another person any orders for the purchase or sale of any commodity for future delivery.

Floor Trader: A person with exchange trading privileges who executes his own trades by being personally present in the pit or ring for futures trading. See Local.

F.O.B. (Free On Board): Indicates that all delivery, inspection and elevation, or loading costs involved in putting commodities on board a carrier have been paid.

Forced Liquidation: The situation in which a customer’s account is liquidated (open positions are offset) by the brokerage firm holding the account, usually after notification that the account is under-margined due to adverse price movements and failure to meet margin calls.

Force Majeure: A clause in a supply contract that permits either party not to fulfill the contractual commitments due to events beyond their control. These events may range from strikes to export delays in producing countries.

Foreign Exchange: Trading in foreign currency.

Forex: Refers to the over-the-counter market for foreign exchange transactions. Also called the foreign exchange market.

Forwardation: See Contango.

Forward Contract: A cash transaction common in many industries, including commodity merchandising, in which a commercial buyer and seller agree upon delivery of a specified quality and quantity of goods at a specified future date. Terms may be more “personalized” than is the case with standardized futures contracts (i.e., delivery time and amount are as determined between seller and buyer). A price may be agreed upon in advance, or there may be agreement that the price will be determined at the time of delivery.

Forward Market: The over-the-counter market for forward contracts.

Forward Months: Futures contracts, currently trading, calling for later or distant delivery. See Deferred Futures, Back Months.

Forward Rate Agreement (FRA): An OTC forward contract on short-term interest rates. The buyer of a FRA is a notional borrower, i.e., the buyer commits to pay a fixed rate of interest on some notional amount that is never actually exchanged. The seller of a FRA agrees notionally to lend a sum of money to
a borrower. FRAs can be used either to hedge interest rate risk or to speculate on future changes in interest rates.

**Freddie Mac**: A corporation (government-sponsored enterprise) created by Congress to support the secondary mortgage market (formerly the Federal Home Loan Mortgage Corporation). It purchases and sells residential mortgages insured by the Federal Home Administration (FHA) or guaranteed by the Veterans Administration (VA). See Fannie Mae.

**Front Month**: The spot or nearby delivery month, the nearest traded contract month. See Back Month.

**Front Running**: With respect to commodity futures and options, taking a futures or option position based upon non-public information regarding an impending transaction by another person in the same or related future or option. Also known as trading ahead.

**Front Spread**: A delta-neutral ratio spread in which more options are sold than bought. Also called ratio vertical spread. A front spread will increase in value if volatility decreases.

**Full Carrying Charge, Full Carry**: See Carrying Charges.

**Fund of Funds**: A commodity pool that invests in other commodity pools rather than directly in futures and options contracts.

**Fundamental Analysis**: Study of basic, underlying factors that will affect the supply and demand of the commodity being traded in futures contracts. See Technical Analysis.

**Fungibility**: The characteristic of interchangeability. Futures contracts for the same commodity and delivery month traded on the same exchange are fungible due to their standardized specifications for quality, quantity, delivery date, and delivery locations.

**Futures**: See Futures Contract.

**Futures Commission Merchant (FCM)**: Individuals, associations, partnerships, corporations, and trusts that solicit or accept orders for the purchase or sale of any commodity for future delivery on or subject to the rules of any exchange and that accept payment from or extend credit to those whose orders are accepted.

**Futures Contract**: An agreement to purchase or sell a commodity for delivery in the future: (1) at a price that is determined at initiation of the contract; (2) that obligates each party to the contract to fulfill the contract at the specified price; (3) that is used to assume or shift price risk; and (4) that may be satisfied by delivery or offset.

**Futures-equivalent**: A term frequently used with reference to speculative position limits for options on futures contracts. The futures-equivalent of an option position is the number of options multiplied by the previous day's risk factor or delta for the option series. For example, ten deep out-of-money options with a delta of 0.20 would be considered two futures-equivalent contracts. The delta or risk factor used for this purpose is the same as that used in delta-based margining and risk analysis systems.
Futures Industry Association (FIA): A membership organization for futures commission merchants (FCMs) which, among other activities, offers education courses on the futures markets, disburses information, and lobbies on behalf of its members.

Futures Option: An option on a futures contract.

Futures Price: (1) Commonly held to mean the price of a commodity for future delivery that is traded on a futures exchange; (2) the price of any futures contract.

G

Gamma: A measurement of how fast the delta of an option changes, given a unit change in the underlying futures price; the “delta of the delta.”

Ginzy Trading: A non-competitive trade practice in which a floor broker, in executing an order—particularly a large order—will fill a portion of the order at one price and the remainder of the order at another price to avoid an exchange's rule against trading at fractional increments or "split ticks."

Give Up: A contract executed by one broker for the client of another broker that the client orders to be turned over to the second broker. The broker accepting the order from the customer collects a fee from the carrying broker for the use of the facilities. Often used to consolidate many small orders or to disperse large ones.

Gold Certificate: A certificate attesting to a person’s ownership of a specific amount of gold bullion.

Gold Fixing (Gold Fix): The setting of the gold price at 10:30 a.m. (first fixing) and 3:00 p.m. (second fixing) in London by representatives of the London gold market.

Gold/Silver Ratio: The number of ounces of silver required to buy one ounce of gold at current spot prices.

Good This Week Order (GTW): Order which is valid only for the week in which it is placed.

Good 'Till Canceled Order (GTC): An order which is valid until cancelled by the customer. Unless specified GTC, unfilled orders expire at the end of the trading day. See Open Order.

GPM: See Gross Processing Margin.

Grades: Various qualities of a commodity.

Grading Certificates: A formal document setting forth the quality of a commodity as determined by authorized inspectors or graders.

Grain Futures Act: Federal statute that provided for the regulation of trading in grain futures, effective June 22, 1923; administered by the Grain Futures Administration, an agency of the U.S. Department of Agriculture. The Grain Futures Act was amended in 1936 by the Commodity Exchange Act and the Grain Futures Administration became the Commodity Exchange Administration, later the Commodity Exchange Authority.
Grantor: The maker, writer, or issuer of an option contract who, in return for the premium paid for the option, stands ready to purchase the underlying commodity (or futures contract) in the case of a put option or to sell the underlying commodity (or futures contract) in the case of a call option.

Gross Processing Margin (GPM): Refers to the difference between the cost of a commodity and the combined sales income of the finished products that result from processing the commodity. Various industries have formulas to express the relationship of raw material costs to sales income from finished products. See Crack Spread, Crush Spread, and Spark Spread.

GTC: See Good 'Till Canceled Order.

GTW: See Good This Week Order.

Guaranteed Introducing Broker: An introducing broker that has entered into a guarantee agreement with a futures commission merchant (FCM), whereby the FCM agrees to be jointly and severally liable for all of the introducing broker’s obligations under the Commodity Exchange Act. By entering into the agreement, the introducing broker is relieved from the necessity of raising its own capital to satisfy minimum financial requirements. In contrast, an independent introducing broker must raise its own capital to meet minimum financial requirements.

H

Haircut: In computing the value of assets for purposes of capital, segregation, or margin requirements, a percentage reduction from the stated value (e.g., book value or market value) to account for possible declines in value that may occur before assets can be liquidated.

Hand Held Terminal: A small computer terminal used by floor brokers or floor traders on an exchange to record trade information and transmit that information to the clearing organization.

Hardening: (1) Describes a price which is gradually stabilizing; (2) a term indicating a slowly advancing market.

Hard Position Limit: A Speculative Position Limit, especially in contrast to a position accountability level.

Head and Shoulders: In technical analysis, a chart formation that resembles a human head and shoulders and is generally considered to be predictive of a price reversal. A head and shoulders top (which is considered predictive of a price decline) consists of a high price, a decline to a support level, a rally to a higher price than the previous high price, a second decline to the support level, and a weaker rally to about the level of the first high price. The reverse (upside-down) formation is called a head and shoulders bottom (which is considered predictive of a price rally).

Heavy: A market in which prices are demonstrating either an inability to advance or a slight tendency to decline.

Hedge Exemption: An exemption from speculative position limits for bona fide hedgers and certain other persons who meet the requirements of exchange and CFTC rules.
Hedge Fund: A private investment fund or pool that trades and invests in various assets such as securities, commodities, currency, and derivatives on behalf of its clients, typically wealthy individuals. Some commodity pool operators operate hedge funds.

Hedge Ratio: Ratio of the value of futures contracts purchased or sold to the value of the cash commodity being hedged, a computation necessary to minimize basis risk.

Hedger: A trader who enters into positions in a futures market opposite to positions held in the cash market to minimize the risk of financial loss from an adverse price change; or who purchases or sells futures as a temporary substitute for a cash transaction that will occur later. One can hedge either a long cash market position (e.g., one owns the cash commodity) or a short cash market position (e.g., one plans on buying the cash commodity in the future).

Henry Hub: A natural gas pipeline hub in Louisiana that serves as the delivery point for New York Mercantile Exchange natural gas futures contracts and often serves as a benchmark for wholesale natural gas prices across the U.S.

Hidden Quantity Order: An order placed on an electronic trading system whereby only a portion of the order is visible to other market participants. As the displayed part of the order is filled, additional quantities become visible. Also called Iceberg, Max Show.

High Frequency Trading: Computerized or algorithmic trading in which transactions are completed in very small fractions of a second.

Historical Volatility: A statistical measure (specifically, the annualized standard deviation) of the volatility of a futures contract, security, or other instrument over a specified number of past trading days.

Hog-Corn Ratio: See Feed Ratio.

Horizontal Spread (also called Time Spread or Calendar Spread): An option spread involving the simultaneous purchase and sale of options of the same class and strike prices but different expiration dates. See Diagonal Spread, Vertical Spread.

Hybrid Instruments: Financial instruments that possess, in varying combinations, characteristics of forward contracts, futures contracts, option contracts, debt instruments, bank depository interests, and other interests. Certain hybrid instruments are exempt from CFTC regulation.

IJK

IB: See Introducing Broker.

Iceberg: See Hidden Quantity Order.

Implied Repo Rate: The rate of return that can be obtained from selling a debt instrument futures contract and simultaneously buying a bond or note deliverable against that futures contract with borrowed funds. The bond or note with the highest implied repo rate is cheapest to deliver.
**Implied Volatility:** The volatility of a futures contract, security, or other instrument as implied by the prices of an option on that instrument, calculated using an option pricing model.

**Index Arbitrage:** The simultaneous purchase (sale) of stock index futures and the sale (purchase) of some or all of the component stocks that make up the particular stock index to profit from sufficiently large intermarket spreads between the futures contract and the index itself. Also see Arbitrage, Program Trading.

**Indirect Bucketing:** Also referred to as indirect trading against. Refers to when a floor broker effectively trades opposite his customer in a pair of non-competitive transactions by buying (selling) opposite an accommodating trader to fill a customer order and by selling (buying) for his personal account opposite the same accommodating trader. The accommodating trader assists the floor broker by making it appear that the customer traded opposite him rather than opposite the floor broker.

**Inflation-Indexed Debt Instrument:** Generally a debt instrument (such as a bond or note) on which the payments are adjusted for inflation and deflation. In a typical inflation-indexed instrument, the principal amount is adjusted monthly based on an inflation index such as the Consumer Price Index.

**Initial Deposit:** See Initial Margin.

**Initial Margin:** Customers' funds put up as security for a guarantee of contract fulfillment at the time a futures market position is established. See Original Margin.

**In Position:** Refers to a commodity located where it can readily be moved to another point or delivered on a futures contract. Commodities not so situated are "out of position." Soybeans in Mississippi are out of position for delivery in Chicago, but in position for export shipment from the Gulf of Mexico.

**In Sight:** The amount of a particular commodity that arrives at terminal or central locations in or near producing areas. When a commodity is "in sight," it is inferred that reasonably prompt delivery can be made; the quantity and quality also become known factors rather than estimates.

**Instrument:** A tradable asset such as a commodity, security, or derivative, or an index or value that underlies a derivative or could underlie a derivative.

**Intercommodity Spread:** A spread in which the long and short legs are in two different but generally related commodity markets. Also called an intermarket spread. See Spread.

**Interdelivery Spread:** A spread involving two different months of the same commodity. Also called an intracommodity spread. See Spread.

**Interest Rate Futures:** Futures contracts traded on fixed income securities such as U.S. Treasury issues, or based on the levels of specified interest rates such as LIBOR (London Interbank Offered Rate). Currency is excluded from this category, even though interest rates are a factor in currency values.

**Interest Rate Swap:** A swap in which the two counterparties agree to exchange interest rate flows. Typically, one party agrees to pay a fixed rate on a specified series of payment dates and the other party
pays a floating rate that may be based on LIBOR (London Interbank Offered Rate) on those payment dates. The interest rates are paid on a specified principal amount called the notional principal.

**Intermarket Spread**: See Spread and Intercommodity Spread.

**Intermediary**: A person who acts on behalf of another person in connection with futures trading, such as a futures commission merchant, introducing broker, commodity pool operator, commodity trading advisor, or associated person.

**International Swaps and Derivatives Association (ISDA)**: A New York-based group of major international swaps dealers, that publishes the Code of Standard Wording, Assumptions and Provisions for Swaps, or Swaps Code, for U.S. dollar interest rate swaps as well as standard master interest rate, credit, and currency swap agreements and definitions for use in connection with the creation and trading of swaps.

**In-The-Money**: A term used to describe an option contract that has a positive value if exercised. A call with a strike price of $390 on gold trading at $400 is in-the-money 10 dollars. See Intrinsic Value.

**Intracommodity Spread**: See Spread and Interdelivery Spread.

**Intrinsic Value**: A measure of the value of an option or a warrant if immediately exercised, that is, the extent to which it is in-the-money. The amount by which the current price for the underlying commodity or futures contract is above the strike price of a call option or below the strike price of a put option for the commodity or futures contract.

**Introducing Broker (IB)**: A person (other than a person registered as an associated person of a futures commission merchant) who is engaged in soliciting or in accepting orders for the purchase or sale of any commodity for future delivery on an exchange who does not accept any money, securities, or property to margin, guarantee, or secure any trades or contracts that result therefrom.

**Inverted Market**: A futures market in which the nearer months are selling at prices higher than the more distant months; a market displaying “inverse carrying charges,” characteristic of markets with supply shortages. See Backwardation.

**Invisible Supply**: Uncounted stocks of a commodity in the hands of wholesalers, manufacturers, and producers that cannot be identified accurately; stocks outside commercial channels but theoretically available to the market. See Visible Supply.

**Invoice Price**: The price fixed by the clearing house at which deliveries on futures are invoiced—generally the price at which the futures contract is settled when deliveries are made. Also called Delivery Price.

**ISDA**: See International Swaps and Derivatives Association.

**Job Lot**: A form of contract having a smaller unit of trading than is featured in a regular contract.

**Kerb Trading or Dealing**: See Curb Trading.

**Knock-In**: A provision in an option or other derivative contract, whereby the contract is activated only if the price of the underlying instrument reaches a specified level before a specified expiration date.
Knock-Out: A provision in an option or other derivative contract, whereby the contract is immediately canceled if the price of the underlying instrument reaches a specified level during the life of the contract.

Large Order Execution (LOX) Procedures: Rules in place at the Chicago Mercantile Exchange that authorize a member firm that receives a large order from an initiating party to solicit counterparty interest off the exchange floor prior to open execution of the order in the pit and that provide for special surveillance procedures. The parties determine a maximum quantity and an "intended execution price." Subsequently, the initiating party's order quantity is exposed to the pit; any bids (or offers) up to and including those at the intended execution price are hit (acceptable). The unexecuted balance is then crossed with the contraside trader found using the LOX procedures.

Large Traders: A large trader is one who holds or controls a position in any one future or in any one option expiration series of a commodity on any one exchange equaling or exceeding the exchange or CFTC-specified reporting level.

Last Notice Day: The final day on which notices of intent to deliver on futures contracts may be issued.

Last Trading Day: Day on which trading ceases for the maturing (current) delivery month. Latency: The amount of time that elapses between the placement of a market order or marketable limit order on an electronic trading system and the execution of that order.

Latency: The amount of time that elapses between the placement of a market order or marketable limit order on an electronic trading system and the execution of that order.


Leverage: The ability to control large dollar amounts of a commodity or security with a comparatively small amount of capital.

LIBOR: The London Interbank Offered Rate. The rate of interest at which banks borrow funds (denominated in U.S. dollars) from other banks, in marketable size, in the London interbank market.

LIBOR rates are disseminated by the British Bankers Association, which also disseminates LIBOR rates for British pounds sterling. Some interest rate futures contracts, including Eurodollar futures, are cash settled based on LIBOR. Also see EURIBOR® and TIBOR.

Licensed Warehouse: A warehouse approved by an exchange from which a commodity may be delivered on a futures contract. See Regular Warehouse.

Life of Contract: Period between the beginning of trading in a particular futures contract and the expiration of trading. In some cases, this phrase denotes the period already passed in which trading has already occurred. For example, “The life-of-contract high so far is $2.50.” Same as life of delivery or life of the future.
Limit (Up or Down): The maximum price advance or decline from the previous day's settlement price permitted during one trading session, as fixed by the rules of an exchange. In some futures contracts, the limit may be expanded or removed during a trading session a specified period of time after the contract is locked limit. See Daily Price Limit.

Limit Move: See Locked Limit.

Limit Only: The definite price stated by a customer to a broker restricting the execution of an order to buy for not more than, or to sell for not less than, the stated price.

Limit Order: An order in which the customer specifies a minimum sale price or maximum purchase price, as contrasted with a market order, which implies that the order should be filled as soon as possible at the market price.

Liquidation: The closing out of a long position. The term is sometimes used to denote closing out a short position, but this is more often referred to as covering. See Cover, Offset.

Liquid Market: A market in which selling and buying can be accomplished with minimal effect on price.

Local: An individual with exchange trading privileges who trades for his own account, traditionally on an exchange floor, and whose activities provide market liquidity. See Floor Trader, E-Local.

Location: A Delivery Point for a futures contract.

Locked-In: A hedged position that cannot be lifted without offsetting both sides of the hedge (spread). See Hedging. Also refers to being caught in a limit price move.

Locked Limit: A price that has advanced or declined the permissible limit during one trading session, as fixed by the rules of an exchange. Also called Limit Move.

London Gold Market: Refers to the dealers in the London Bullion Market Association who set (fix) the gold price in London. See Gold Fixing.

Long: (1) One who has bought a futures contract to establish a market position; (2) a market position that obligates the holder to take delivery; (3) one who owns an inventory of commodities. See Short.

Long Hedge: See Buying Hedge.

Long the Basis: A person or firm that has bought the spot commodity and hedged with a sale of futures is said to be long the basis.

Lookalike Option: An over-the-counter option that is cash settled based on the settlement price of a similar exchange-traded futures contract on a specified trading day.

Lookalike Swap: An over-the-counter swap that is cash settled based on the settlement price of a similar exchange-traded futures contract on a specified trading day.

Lookback Option: An exotic option whose payoff depends on the minimum or maximum price of the underlying asset during some portion of the life of the option. Lookback options allow the buyer to pay or receive the most favorable underlying price during the lookback period.
Lot: A unit of trading. See Even Lot, Job Lot, and Round Lot.

M

Macro Fund: A hedge fund that specializes in strategies designed to profit from expected macroeconomic events.

Maintenance Margin: See Margin.

Managed Account: See Controlled Account and Discretionary Account.

Managed Money Trader (MMTs): A futures market participant who engages in futures trades on behalf of investment funds or clients. While MMTs are commonly equated with hedge funds, they may include Commodity Pool Operators and other managed accounts as well as hedge funds. While CFTC Form 40 does not provide a place to declare oneself a Managed Money Trader, a large trader can declare itself a “Hedge Fund (H)” or “Managed Accounts and Commodity Pools.”

Manipulation: Any planned operation, transaction, or practice that causes or maintains an artificial price. Specific types include corners and squeezes as well as unusually large purchases or sales of a commodity or security in a short period of time in order to distort prices, and putting out false information in order to distort prices.

Manufacturer (AM): A large trader that declares itself a “Manufacturer” on CFTC Form 40, which provides as examples “refiner, miller, crusher, fabricator, sawmill, coffee roaster, cocoa grinder.”

Many-to-Many: Refers to a trading platform in which multiple participants have the ability to execute or trade commodities, derivatives, or other instruments by accepting bids and offers made by multiple other participants. In contrast to one-to-many platforms, many-to-many platforms are considered trading facilities under the Commodity Exchange Act. Traditional exchanges are many-to-many platforms.

Margin: The amount of money or collateral deposited by a customer with his broker, by a broker with a clearing member, or by a clearing member with a clearing organization. The margin is not partial payment on a purchase. Also called Performance Bond. (1) Initial margin is the amount of margin required by the broker when a futures position is opened; (2) Maintenance margin is an amount that must be maintained on deposit at all times. If the equity in a customer’s account drops to or below the level of maintenance margin because of adverse price movement, the broker must issue a margin call to restore the customer’s equity to the initial level. See Variation Margin. Exchanges specify levels of initial margin and maintenance margin for each futures contract, but futures commission merchants may require their customers to post margin at higher levels than those specified by the exchange. Futures margin is determined by the SPAN margining system, which takes into account all positions in a customer’s portfolio.
Margin Call: (1) A request from a brokerage firm to a customer to bring margin deposits up to initial levels; (2) a request by the clearing organization to a clearing member to make a deposit of original margin, or a daily or intra-day variation margin payment because of adverse price movement, based on positions carried by the clearing member.

Market-if-Touched (MIT) Order: An order that becomes a market order when a particular price is reached. A sell MIT is placed above the market; a buy MIT is placed below the market. Also referred to as a board order. Compare to Stop Order.

Market Maker: A professional securities dealer or person with trading privileges on an exchange who has an obligation to buy when there is an excess of sell orders and to sell when there is an excess of buy orders. By maintaining an offering price sufficiently higher than their buying price, these firms are compensated for the risk involved in allowing their inventory of securities to act as a buffer against temporary order imbalances. In the futures industry, this term is sometimes loosely used to refer to a floor trader or local who, in speculating for his own account, provides a market for commercial users of the market. Occasionally a futures exchange will compensate a person with exchange trading privileges to take on the obligations of a market maker to enhance liquidity in a newly listed or lightly traded futures contract. See Specialist System.

Market-on-Close: An order to buy or sell at the end of the trading session at a price within the closing range of prices. See Stop-Close-Only Order.

Market-on-Opening: An order to buy or sell at the beginning of the trading session at a price within the opening range of prices.

Market Order: An order to buy or sell a futures contract at whatever price is obtainable at the time it is entered in the ring, pit, or other trading platform. See At-the-Market Limit Order.

Mark-to-Market: Part of the daily cash flow system used by U.S. futures exchanges to maintain a minimum level of margin equity for a given futures or option contract position by calculating the gain or loss in each contract position resulting from changes in the price of the futures or option contracts at the end of each trading session. These amounts are added or subtracted to each account balance.

Maturity: Period within which a futures contract can be settled by delivery of the actual commodity.

Max Show: See Hidden Quantity Order.

Maximum Price Fluctuation: See Limit (Up or Down) and Daily Price Limit.

Member Rate: Commission charged for the execution of an order for a person who is a member of or has trading privileges at the exchange.

Mini: Refers to a futures contract that has a smaller contract size than an otherwise identical futures contract.
**Minimum Price Contract**: A hybrid commercial forward contract for agricultural products that includes a provision guaranteeing the person making delivery a minimum price for the product. For agricultural commodities, these contracts became much more common with the introduction of exchange-traded options on futures contracts, which permit buyers to hedge the price risks associated with such contracts.

**Minimum Price Fluctuation (Minimum Tick)**: Smallest increment of price movement possible in trading a given contract.

**Minimum Tick**: See Minimum Price Fluctuation.

**MMBTU**: Million British Thermal Units, the unit of trading in the natural gas futures market.

**MOB Spread**: A spread between the municipal bond futures contract and the Treasury bond contract, also known as munis over bonds.

**Momentum**: In technical analysis, the relative change in price over a specific time interval. Often equated with speed or velocity and considered in terms of relative strength.

**Money Market**: The market for short-term debt instruments.

**Multilateral Clearing Organization**: See Clearing Organization

**N**

**Naked Option**: The sale of a call or put option without holding an equal and opposite position in the underlying instrument. Also referred to as an uncovered option, naked call, or naked put.

**Narrow-Based Security Index**: In general, the Commodity Exchange Act defines a narrow-based security index as an index of securities that meets one of the following four requirements (1) it has nine or fewer components; (2) one component comprises more than 30 percent of the index weighting; (3) the five highest weighted components comprise more than 60 percent of the index weighting, or (4) the lowest weighted components comprising in the aggregate 25 percent of the index’s weighting have an aggregate dollar value of average daily volume over a six-month period of less than $50 million ($30 million if there are at least 15 component securities). However, the legal definition in Section 1a(25) of the Commodity Exchange Act, 7 USC 1a(25), contains several exceptions to this provision. See Broad-Based Security Index, Security Future.

**National Futures Association** (NFA): A self-regulatory organization whose members include futures commission merchants, commodity pool operators, commodity trading advisors, introducing brokers, commodity exchanges, commercial firms, and banks, that is responsible—under CFTC oversight—for certain aspects of the regulation of FCMs, CPOs, CTAs, IBs, and their associated persons, focusing primarily on the qualifications and proficiency, financial condition, retail sales practices, and business conduct of these futures professionals. NFA also performs arbitration and dispute resolution functions for industry participants.

**Nearbys**: The nearest delivery months of a commodity futures market.
Nearby Delivery Month: The month of the futures contract closest to maturity; the front month or lead month.

Negative Carry: The cost of financing a financial instrument (the short-term rate of interest), when the cost is above the current return of the financial instrument. See Carrying Charges and Positive Carry.

Net Asset Value (NAV): The value of each unit of participation in a commodity pool.

Net Position: The difference between the open long contracts and the open short contracts held by a trader in any one commodity.


Next Day: A spot contract that provides for delivery of a commodity on the next calendar day or the next business day. Also called day ahead.

NOB (Note Against Bond) Spread: A futures spread trade involving the buying (selling) of a ten-year Treasury note futures contract and the selling (buying) of a Treasury bond futures contract.

Non-Member Traders: Speculators and hedgers who trade on the exchange through a member or a person with trading privileges but who do not hold exchange memberships or trading privileges.

Nominal Price (or Nominal Quotation): Computed price quotation on a futures or option contract for a period in which no actual trading took place, usually an average of bid and asked prices or computed using historical or theoretical relationships to more active contracts.

Notice Day: Any day on which notices of intent to deliver on futures contracts may be issued.

Notice of Intent to Deliver: A notice that must be presented by the seller of a futures contract to the clearing organization prior to delivery. The clearing organization then assigns the notice and subsequent delivery instrument to a buyer. Also notice of delivery.

Notional Principal: In an interest rate swap, forward rate agreement, or other derivative instrument, the amount or, in a currency swap, each of the amounts to which interest rates are applied in order to calculate periodic payment obligations. Also called the notional amount, the contract amount, the reference amount, and the currency amount.

NYMEX Lookalike: A lookalike swap or lookalike option that is based on a futures contract traded on the New York Mercantile Exchange (NYMEX).

O

OCO: See One Cancels the Other Order.

Offer: An indication of willingness to sell at a given price; opposite of bid, the price level of the offer may be referred to as the ask.

Off Exchange: See Over-the-Counter.
Offset: Liquidating a purchase of futures contracts through the sale of an equal number of contracts of the same delivery month, or liquidating a short sale of futures through the purchase of an equal number of contracts of the same delivery month. See Closing Out and Cover.

Omnibus Account: An account carried by one futures commission merchant, the carrying FCM, for another futures commission merchant, the originating FCM, in which the transactions of two or more persons, who are customers of the originating FCM, are combined and carried by the carrying FCM. Omnibus account titles must clearly show that the funds and trades therein belong to customers of the originating FCM. An originating broker must use an omnibus account to execute or clear trades for customers at a particular exchange where it does not have trading or clearing privileges.

On Track (or Track Country Station): (1) A type of deferred delivery in which the price is set f.o.b. seller’s location, and the buyer agrees to pay freight costs to his destination; (2) commodities loaded in railroad cars on tracks.

One Cancels the Other (OCO) Order: A pair of orders, typically limit orders, whereby if one order is filled, the other order will automatically be cancelled. For example, an OCO order might consist of an order to buy 10 calls with a strike price of 50 at a specified price or buy 20 calls with a strike price of 55 (with the same expiration date) at a specified price.

One-to-Many: Refers to a proprietary trading platform in which the platform operator posts bids and offers for commodities, derivatives, or other instruments and serves as a counterparty to every transaction executed on the platform. In contrast to many-to-many platforms, one-to-many platforms are not considered trading facilities under the Commodity Exchange Act.

Opening Price (or Range): The price (or price range) recorded during the period designated by the exchange as the official opening.

Opening: The period at the beginning of the trading session officially designated by the exchange during which all transactions are considered made “at the opening.”

Open Interest: The total number of futures contracts long or short in a delivery month or market that has been entered into and not yet liquidated by an offsetting transaction or fulfilled by delivery. Also called open contracts or open commitments.

Open Order (or Orders): An order that remains in force until it is canceled or until the futures contracts expire. See Good 'Till Canceled and Good This Week orders.

Open Outcry: A method of public auction, common to most U.S. commodity exchanges during the 20th century, where trading occurs on a trading floor and traders may bid and offer simultaneously either for their own accounts or for the accounts of customers. Transactions may take place simultaneously at different places in the trading pit or ring. At most exchanges been replaced or largely replaced by electronic trading platforms. See Specialist System.
Open Trade Equity: The unrealized gain or loss on open futures positions.

Option: A contract that gives the buyer the right, but not the obligation, to buy or sell a specified quantity of a commodity or other instrument at a specific price within a specified period of time, regardless of the market price of that instrument. Also see Put and Call.

Option Buyer: The person who buys calls, puts, or any combination of calls and puts.

Option Delta: See Delta.

Option Writer: The person who originates an option contract by promising to perform a certain obligation in return for the price or premium of the option. Also known as option grantor or option seller.

Option Pricing Model: A mathematical model used to calculate the theoretical value of an option. Inputs to option pricing models typically include the price of the underlying instrument, the option strike price, the time remaining till the expiration date, the volatility of the underlying instrument, and the risk-free interest rate (e.g., the Treasury bill interest rate). Examples of option pricing models include Black-Scholes and Cox-Ross-Rubinstein.

Original Margin: Term applied to the initial deposit of margin money each clearing member firm is required to make according to clearing organization rules based upon positions carried, determined separately for customer and proprietary positions; similar in concept to the initial margin or security deposit required of customers by exchange rules. See Initial Margin.

OTC: See Over-the-Counter.

Out of Position: See In Position.

Out-Of-The-Money: A term used to describe an option that has no intrinsic value. For example, a call with a strike price of $400 on gold trading at $390 is out-of-the-money 10 dollars.

Outright: An order to buy or sell only one specific type of futures contract; an order that is not a spread order.

Out Trade: A trade that cannot be cleared by a clearing organization because the trade data submitted by the two clearing members or two traders involved in the trade differs in some respect (e.g., price and/or quantity). In such cases, the two clearing members or traders involved must reconcile the discrepancy, if possible, and resubmit the trade for clearing. If an agreement cannot be reached by the two clearing members or traders involved, the dispute would be settled by an appropriate exchange committee.

Overbought: A technical opinion that the market price has risen too steeply and too fast in relation to underlying fundamental factors. Rank and file traders who were bullish and long have turned bearish.

Overnight Trade: A trade which is not liquidated during the same trading session during which it was established.
Oversold: A technical opinion that the market price has declined too steeply and too fast in relation to underlying fundamental factors; rank and file traders who were bearish and short have turned bullish.

Over-the-Counter (OTC): The trading of commodities, contracts, or other instruments not listed on any exchange. OTC transactions can occur electronically or over the telephone. Also referred to as Off-Exchange.

P

P&S (Purchase and Sale Statement): A statement sent by a futures commission merchant to a customer when any part of a futures position is offset, showing the number of contracts involved, the prices at which the contracts were bought or sold, the gross profit or loss, the commission charges, the net profit or loss on the transactions, and the balance. FCMs also send P&S Statements whenever any other event occurs that alters the account balance including when the customer deposits or withdraws margin and when the FCM places excess margin in interest bearing instruments for the customer’s benefit.

Paper Profit or Loss: The profit or loss that would be realized if open contracts were liquidated as of a certain time or at a certain price.

Par: (1) Refers to the standard delivery point(s) and/or quality of a commodity that is deliverable on a futures contract at contract price. Serves as a benchmark upon which to base discounts or premiums for varying quality and delivery locations; (2) in bond markets, an index (usually 100) representing the face value of a bond.

Path Dependent Option: An option whose valuation and payoff depends on the realized price path of the underlying asset, such as an Asian option or a Lookback option.

Pay/Collect: A shorthand method of referring to the payment of a loss (pay) and receipt of a gain (collect) by a clearing member to or from a clearing organization that occurs after a futures position has been marked-to-market. See Variation Margin.

Pegged Price: The price at which a commodity has been fixed by agreement.

Pegging: Effecting transactions in an instrument underlying an option to prevent a decline in the price of the instrument shortly prior to the option’s expiration date so that previously written put options will expire worthless, thus protecting premiums previously received. See Capping.

Performance Bond: See Margin.

Physical: A contract or derivative that provides for the physical delivery of a commodity rather than cash settlement. See Financial.

Physical Commodity: A commodity other than a financial commodity, typically an agricultural commodity, energy commodity or a metal.

Physical Delivery: A provision in a futures contract or other derivative for delivery of the actual commodity to satisfy the contract. Compare to cash settlement.
Pip: The smallest price unit of a commodity or currency.

Pit: A specially constructed area on the trading floor of some exchanges where trading in a futures contract or option is conducted. On other exchanges, the term ring designates the trading area for commodity contract.

Pit Brokers: See Floor Broker.

Point-and-Figure: A method of charting that uses prices to form patterns of movement without regard to time. It defines a price trend as a continued movement in one direction until a reversal of a predetermined criterion is met.

Point Balance: A statement prepared by futures commission merchants to show profit or loss on all open contracts using an official closing or settlement price, usually at calendar month end.

Ponzi Scheme: Named after Charles Ponzi, a man with a remarkable criminal career in the early 20th century, the term has been used to describe pyramid arrangements whereby an enterprise makes payments to investors from the proceeds of a later investment rather than from profits of the underlying business venture, as the investors expected, and gives investors the impression that a legitimate profit-making business or investment opportunity exists, where in fact it is a mere fiction.

Pork Bellies: One of the major cuts of the hog carcase that, when cured, becomes bacon.

Portfolio Insurance: A trading strategy that uses stock index futures and/or stock index options to protect stock portfolios against market declines.

Portfolio Margining: A method for setting margin requirements that evaluates positions as a group or portfolio and takes into account the potential for losses on some positions to be offset by gains on others. Specifically, the margin requirement for a portfolio is typically set equal to an estimate of the largest possible decline in the net value of the portfolio that could occur under assumed changes in market conditions. Sometimes referred to as risked-based margining. Also see Strategy-Based Margining.

Position: An interest in the market, either long or short, in the form of one or more open contracts.

Position Accountability: A rule adopted by an exchange requiring persons holding a certain number of outstanding contracts to report the nature of the position, trading strategy, and hedging information of the position to the exchange, upon request of the exchange. See Speculative Position Limit.


Position Trader: A commodity trader who either buys or sells contracts and holds them for an extended period of time, as distinguished from a day trader, who will normally initiate and offset a futures position within a single trading session.

Positive Carry: The cost of financing a financial instrument (the short-term rate of interest), where the cost is less than the current return of the financial instrument. See Carrying Charges and Negative Carry.
Posted Price: An announced or advertised price indicating what a firm will pay for a commodity or the price at which the firm will sell it.

Prearranged Trading: Trading between brokers in accordance with an expressed or implied agreement or understanding, which is a violation of the Commodity Exchange Act and CFTC regulations.

Premium: (1) The payment an option buyer makes to the option writer for granting an option contract; (2) the amount a price would be increased to purchase a better quality commodity; (3) refers to a futures delivery month selling at a higher price than another, as “July is at a premium over May.”

Price Banding: A CME Group and ICE-instituted mechanism to ensure a fair and orderly market on an electronic trading platform. This mechanism subjects all incoming orders to price verification and rejects all orders with clearly erroneous prices. Price bands are monitored throughout the day and adjusted if necessary.

Price Basing: A situation where producers, processors, merchants, or consumers of a commodity establish commercial transaction prices based on the futures prices for that or a related commodity (e.g., an offer to sell corn at 5 cents over the December futures price). This phenomenon is commonly observed in grain and metal markets.

Price Discovery: The process of determining the price level for a commodity based on supply and demand conditions. Price discovery may occur in a futures market or cash market.

Price Movement Limit: See Limit (Up or Down).

Primary Market: (1) For producers, their major purchaser of commodities; (2) to processors, the market that is the major supplier of their commodity needs; and (3) in commercial marketing channels, an important center at which spot commodities are concentrated for shipment to terminal markets.

Producer (AP): A large trader that declares itself a “Producer” on CFTC Form 40, which provides as examples, “farmer” and “miner.” A firm that extracts crude oil or natural gas from the ground would also be considered a Producer.

Program Trading: The purchase (or sale) of a large number of stocks contained in or comprising a portfolio. Originally called program trading when index funds and other institutional investors began to embark on large-scale buying or selling campaigns or “programs” to invest in a manner that replicates a target stock index, the term now also commonly includes computer-aided stock market buying or selling programs, and index arbitrage.

Prompt Date: The date on which the buyer of an option will buy or sell the underlying commodity (or futures contract) if the option is exercised.

Prop Shop: A proprietary trading group, especially one where the group's traders trade electronically at a physical facility operated by the group.
Proprietary Account: An account that a futures commission merchant carries for itself or a closely related person, such as a parent, subsidiary or affiliate company, general partner, director, associated person, or an owner of 10 percent or more of the capital stock. The FCM must segregate customer funds from funds related to proprietary accounts.

Proprietary Trading Group: An organization whose owners, employees, and/or contractors trade in the name of accounts owned by the group and exclusively use the funds of the group for all of their trading activity.

Public: In trade parlance, non-professional speculators as distinguished from hedgers and professional speculators or traders.

Public Elevators: Grain elevators in which bulk storage of grain is provided to the public for a fee. Grain of the same grade but owned by different persons is usually mixed or commingled as opposed to storing it "identity preserved." Some elevators are approved by exchanges as regular for delivery on futures contracts, see Regular Warehouse.

Purchase and Sale Statement: See P&S.

Put: An option contract that gives the holder the right but not the obligation to sell a specified quantity of a particular commodity, security, or other asset or to enter into a short futures position at a given price (the "strike price") prior to or on a specified expiration date.

Pyramiding: The use of profits on existing positions as margin to increase the size of the position, normally in successively smaller increments.

QR

Qualified Eligible Person (QEP): The definition of QEP is too complex to summarize here; please see CFTC Regulation 4.7(a)(2) and (a)(3), 17 CFR 4.7(a)(2) and (a)(3), for the full definition.

Quick Order: See Fill or Kill Order.

Quotation: The actual price or the bid or ask price of either cash commodities or futures contracts.

Rally: An upward movement of prices.

Random Walk: An economic theory that market price movements move randomly. This assumes an efficient market. The theory also assumes that new information comes to the market randomly. Together, the two assumptions imply that market prices move randomly as new information is incorporated into market prices. The theory implies that the best predictor of future prices is the current price, and that past prices are not a reliable indicator of future prices. If the random walk theory is correct, technical analysis cannot work.

Range: The difference between the high and low price of a commodity, futures, or option contract during a given period.
**Ratio Hedge:** The number of options compared to the number of futures contracts bought or sold in order to establish a hedge that is neutral or delta neutral.

**Ratio Spread:** This strategy, which applies to both puts and calls, involves buying or selling options at one strike price in greater number than those bought or sold at another strike price. Ratio spreads are typically designed to be delta neutral. Back spreads and front preads are types of ratio spreads.

**Ratio Vertical Spread:** See Front Spread.

**Reaction:** A downward price movement after a price advance.

**Recovery:** An upward price movement after a decline.

**Reference Asset:** An asset, such as a corporate or sovereign debt instrument, that underlies a credit derivative.

**Regular Warehouse:** A processing plant or warehouse that satisfies exchange requirements for financing, facilities, capacity, and location and has been approved as acceptable for delivery of commodities against futures contracts. See Licensed Warehouse.

**Replicating Portfolio:** A portfolio of assets for which changes in value match those of a target asset. For example, a portfolio replicating a standard option can be constructed with certain amounts of the asset underlying the option and bonds. Sometimes referred to as a synthetic asset.

**Repo or Repurchase Agreement:** A transaction in which one party sells a security to another party while agreeing to repurchase it from the counterparty at some date in the future, at an agreed price. Repos allow traders to short-sell securities and allow the owners of securities to earn added income by lending the securities they own. Through this operation the counterparty is effectively a borrower of funds to finance further. The rate of interest used is known as the repo rate.

**Reporting Level:** Sizes of positions set by the exchanges and/or the CFTC at or above which commodity traders or brokers who carry these accounts must make daily reports about the size of the position by commodity, by delivery month, and whether the position is controlled by a commercial or non-commercial trader. See the Large Trader Reporting Program.

**Resistance:** In technical analysis, a price area where new selling will emerge to dampen a continued rise. See Support.

**Resting Order:** A limit order to buy at a price below or to sell at a price above the prevailing market that is being held by a floor broker. Such orders may either be day orders or open orders.

**Retail Customer:** A customer that does not qualify as an eligible contract participant under Section 1a(12) of the Commodity Exchange Act, 7 USC 1a(12). An individual with total assets that do not exceed $10 million, or $5 million if the individual is entering into an agreement, contract, or transaction to manage risk, would be considered a retail customer.
Retender: In specific circumstances, some exchanges permit holders of futures contracts who have received a delivery notice through the clearing organization to sell a futures contract and return the notice to the clearing organization to be reissued to another long; others permit transfer of notices to another buyer. In either case, the trader is said to have retendered the notice.

Retracement: A reversal within a major price trend.

Reversal: A change of direction in prices. See Reverse Conversion.

Reverse Conversion or Reversal: With regard to options, a position created by buying a call option, selling a put option, and selling the underlying instrument (for example, a futures contract). See Conversion.

Reverse Crush Spread: The sale of soybean futures and the simultaneous purchase of soybean oil and meal futures. See Crush Spread.

Riding the Yield Curve: Trading in an interest rate futures contract according to the expectations of change in the yield curve.

Ring: A circular area on the trading floor of an exchange where traders and brokers stand while executing futures trades. Some exchanges use pits rather than rings.

Risked-Based Margining: See Portfolio Margining.

Risk Factor: See Delta.

Risk/Reward Ratio: The relationship between the probability of loss and profit. This ratio is often used as a basis for trade selection or comparison.

Roll-Over: A trading procedure involving the shift of one month of a straddle into another future month while holding the other contract month. The shift can take place in either the long or short straddle month. The term also applies to lifting a near futures position and re-establishing it in a more deferred delivery month.

Round Lot: A quantity of a commodity equal in size to the corresponding futures contract for the commodity. See Even Lot.

Round Trip Trading: See Wash Trading.

Round Turn: A completed transaction involving both a purchase and a liquidating sale, or a sale followed by a covering purchase.

Rules: The principles for governing an exchange. In some exchanges, rules are adopted by a vote of the membership, while in others, they can be imposed by the governing board.

Runners: Messengers or clerks who deliver orders received by phone clerks to brokers for execution in the pit.
S

Sample Grade: Usually the lowest quality of a commodity, too low to be acceptable for delivery in satisfaction of futures contracts.

Scale Down (or Up): To purchase or sell a scale down means to buy or sell at regular price intervals in a declining market. To buy or sell on scale up means to buy or sell at regular price intervals as the market advances.

Scalper: A speculator often with exchange trading privileges who buys and sells rapidly, with small profits or losses, holding his positions for only a short time during a trading session. Typically, a scalper will stand ready to buy at a fraction below the last transaction price and to sell at a fraction above, e.g., to buy at the bid and sell at the offer or ask price, with the intent of capturing the spread between the two, thus creating market liquidity. See Day Trader, Position Trader, High Frequency Trading.

Seasonality Claims: Misleading sales pitches that one can earn large profits with little risk based on predictable seasonal changes in supply or demand, published reports or other well-known events.

Seat: An instrument granting trading privileges on an exchange. A seat may also represent an ownership interest in the exchange.


Security: Generally, a transferable instrument representing an ownership interest in a corporation (equity security or stock) or the debt of a corporation, municipality, or sovereign. Other forms of debt such as mortgages can be converted into securities. Certain derivatives on securities (e.g., options on equity securities) are also considered securities for the purposes of the securities laws. Security futures products are considered to be both securities and futures products. Futures contracts on broad-based securities indexes are not considered securities.

Security Deposit: See Margin.

Security Future: A contract for the sale or future delivery of a single security or of a narrow-based security index.

Security Futures Product: A security future or any put, call, straddle, option, or privilege on any security future.

Self-Regulatory Organization (SRO): Exchanges and registered futures associations that enforce financial and sales practice requirements for their members. See Designated Self-Regulatory Organizations.

Seller’s Call: Seller’s call, also referred to as call purchase, is the same as the buyer’s call except that the seller has the right to determine the time to fix the price. See Buyer’s Call.

Seller’s Market: A condition of the market in which there is a scarcity of goods available and hence sellers can obtain better conditions of sale or higher prices. See Buyer’s Market.
**Seller’s Option:** The right of a seller to select, within the limits prescribed by a contract, the quality of the commodity delivered and the time and place of delivery.

**Selling Hedge (or Short Hedge):** Selling futures contracts to protect against possible decreased prices of commodities. See Hedging.

**Series (of Options):** Options of the same type (i.e., either puts or calls, but not both), covering the same underlying futures contract or other underlying instrument, having the same strike price and expiration date.

**Settlement:** The act of fulfilling the delivery requirements of the futures contract.

**Settlement Price:** The daily price at which the clearing organization clears all trades and settles all accounts between clearing members of each contract month. Settlement prices are used to determine both margin calls and invoice prices for deliveries. The term also refers to a price established by the exchange to even up positions which may not be able to be liquidated in regular trading.

**Shipping Certificate:** A negotiable instrument used by several futures exchanges as the futures delivery instrument for several commodities (e.g., soybean meal, plywood, and white wheat). The shipping certificate is issued by exchange-approved facilities and represents a commitment by the facility to deliver the commodity to the holder of the certificate under the terms specified therein. Unlike an issuer of a warehouse receipt, who has physical product in store, the issuer of a shipping certificate may honor its obligation from current production or through-put as well as from inventories.

**Shock Absorber:** A temporary restriction in the trading of certain stock index futures contracts that becomes effective following a significant intraday decrease in stock index futures prices. Designed to provide an adjustment period to digest new market information, the restriction bars trading below a specified price level. Shock absorbers are generally market specific and at tighter levels than circuit breakers.

**Short:** (1) The selling side of an open futures contract; (2) a trader whose net position in the futures market shows an excess of open sales over open purchases. See Long.

**Short Covering:** See Cover.

**Short Hedge:** See Selling Hedge.

**Short Selling:** Selling a futures contract or other instrument with the idea of delivering on it or offsetting it at a later date.

**Short Squeeze:** See Squeeze.

**Short the Basis:** The purchase of futures as a hedge against a commitment to sell in the cash or spot markets. See Hedging.
**Significant Price Discovery Contract (SPDC):** A contract traded on an Exempt Commercial Market (ECM) which performs a significant price discovery function as determined by the CFTC pursuant to CFTC Regulation 36.3 (c). ECMS with SPDCs are subject to additional regulatory and reporting requirements.

**Single Stock Future:** A futures contract on a single stock as opposed to a stock index. Single stock futures were illegal in the U.S. prior to the passage of the Commodity Futures Modernization Act in 2000. See Security Future, Security Futures Product.

**Small Traders:** Traders who hold or control positions in futures or options that are below the reporting level specified by the exchange or the CFTC.

**Soft:** (1) A description of a price that is gradually weakening; or (2) this term also refers to certain “soft” commodities such as sugar, cocoa, and coffee.

**Sold-Out-Market:** When liquidation of a weakly-held position has been completed, and offerings become scarce, the market is said to be sold out.

**SPAN® (Standard Portfolio Analysis of Risk®):** As developed by the Chicago Mercantile Exchange, the industry standard for calculating performance bond requirements (margins) on the basis of overall portfolio risk. SPAN calculates risk for all enterprise levels on derivative and non-derivative instruments at numerous exchanges and clearing organizations worldwide.

**Spark Spread:** The differential between the price of electricity and the price of natural gas or other fuel used to generate electricity, expressed in equivalent units. See Gross Processing Margin.

**SPDC:** See Significant Price Discovery Contract.

**Specialist System:** A type of trading formerly used for the exchange trading of securities in which one individual or firm acts as a market-maker in a particular security, with the obligation to provide fair and orderly trading in that security by offsetting temporary imbalances in supply and demand by trading for the specialist’s own account. Like open outcry, the specialist system was supplanted by electronic trading during the early 21st century. In 2008, the New York Stock Exchange replaced the specialist system with a competitive dealer system. Specialists were converted into Designated Market Makers who have a different set of privileges and obligations than specialists had.

**Speculative Bubble:** A rapid run-up in prices caused by excessive buying that is unrelated to any of the basic, underlying factors affecting the supply or demand for a commodity or other asset. Speculative bubbles are usually associated with a “bandwagon” effect in which speculators rush to buy the commodity (in the case of futures, “to take positions”) before the price trend ends, and an even greater rush to sell the commodity (unwind positions) when prices reverse.

**Speculative Limit:** See Speculative Position Limit.

**Speculative Position Limit:** The maximum position, either net long or net short, in one commodity future (or option) or in all futures (or options) of one commodity combined that may be held or controlled by
one person (other than a person eligible for a hedge exemption) as prescribed by an exchange and/or by the CFTC.

**Speculator**: In commodity futures, a trader who does not hedge, but who trades with the objective of achieving profits through the successful anticipation of price movements.

**Split Close**: A condition that refers to price differences in transactions at the close of any market session.

**Spot**: Market of immediate delivery of and payment for the product.

**Spot Commodity**: (1) The actual commodity as distinguished from a futures contract; (2) sometimes used to refer to cash commodities available for immediate delivery. See Actuals or Cash Commodity.

**Spot Month**: The futures contract that matures and becomes deliverable during the present month. Also called Current Delivery Month.

**Spot Price**: The price at which a physical commodity for immediate delivery is selling at a given time and place. See Cash Price.

**Spread (or Straddle)**: The purchase of one futures delivery month against the sale of another futures delivery month of the same commodity; the purchase of one delivery month of one commodity against the sale of that same delivery month of a different commodity; or the purchase of one commodity in one market against the sale of the commodity in another market, to take advantage of a profit from a change in price relationships. The term spread is also used to refer to the difference between the price of a futures month and the price of another month of the same commodity. A spread can also apply to options. See Arbitrage.

**Squeeze**: A market situation in which the lack of supplies tends to force shorts to cover their positions by offset at higher prices. Also see Congestion, Corner.

**SRO**: See Self-Regulatory Organization.

**Stop-Close-Only Order**: A stop order that can be executed, if possible, only during the closing period of the market. See also Market-on-Close Order.

**Stop Limit Order**: A stop limit order is an order that goes into force as soon as there is a trade at the specified price. The order, however, can only be filled at the stop limit price or better.

**Stop Logic Functionality**: A provision applicable to futures traded on the CME’s Globex electronic trading system designed to prevent excessive price movements caused by cascading stop orders. Stop Logic Functionality introduces a momentary pause in matching (Reserved State) when triggered stops would cause the market to trade outside predefined values. The momentary pause provides an opportunity for additional bids or offers to be posted

**Stop Loss Order**: See Stop Order.
Stop Order: This is an order that becomes a market order when a particular price level is reached. A sell stop is placed below the market, a buy stop is placed above the market. Sometimes referred to as stop loss order. Compare to market-if-touched order.

Straddle: (1) See Spread; (2) an option position consisting of the purchase of put and call options having the same expiration date and strike price.

Strangle: An option position consisting of the purchase of put and call options having the same expiration date, but different strike prices.

Strategy-Based Margining: A method for setting margin requirements whereby the potential for gains on one position in a portfolio to offset losses on another position is taken into account only if the portfolio implements one of a designated set of recognized trading strategies as set out in the rules of an exchange or clearing organization. Also see Portfolio Margining.

Street Book: A daily record kept by futures commission merchants and clearing members showing details of each futures and option transaction, including date, price, quantity, market, commodity, future, strike price, option type, and the person for whom the trade was made.

Strike Price (Exercise Price): The price, specified in the option contract, at which the underlying futures contract, security, or commodity will move from seller to buyer.

Strip: A sequence of futures contract months (e.g., the June, July, and August natural gas futures contracts) that can be executed as a single transaction.

STRIPS (Separate Trading of Registered Interest and Principal Securities): A book-entry system operated by the Federal Reserve permitting separate trading and ownership of the principal and coupon portions of selected Treasury securities. It allows the creation of zero coupon Treasury securities from designated whole bonds.

Strong Hands: When used in connection with delivery of commodities on futures contracts, the term usually means that the party receiving the delivery notice probably will take delivery and retain ownership of the commodity; when used in connection with futures positions, the term usually means positions held by trade interests or well-financed speculators.

Support: In technical analysis, a price area where new buying is likely to come in and stem any decline. See Resistance.

Swap: In general, the exchange of one asset or liability for a similar asset or liability for the purpose of lengthening or shortening maturities, or otherwise shifting risks. This may entail selling one securities issue and buying another in foreign currency; it may entail buying a currency on the spot market and simultaneously selling it forward. Swaps also may involve exchanging income flows; for example, exchanging the fixed rate coupon stream of a bond for a variable rate payment stream, or vice versa,
while not swapping the principal component of the bond. Swaps are generally traded over-the-counter. See Commodity Swap.

Swap Dealer (AS): An entity such as a bank or investment bank that markets swaps to end users. Swap dealers often hedge their swap positions in futures markets. Alternatively, an entity that declares itself a “Swap/Derivatives Dealer” on CFTC Form 40.

Swaption: An option to enter into a swap—i.e., the right, but not the obligation, to enter into a specified type of swap at a specified future date.

Switch: Offsetting a position in one delivery month of a commodity and simultaneous initiation of a similar position in another delivery month of the same commodity, a tactic referred to as “rolling forward.”

Synthetic Futures: A position created by combining call and put options. A synthetic long futures position is created by combining a long call option and a short put option for the same expiration date and the same strike price. A synthetic short futures contract is created by combining a long put and a short call with the same expiration date and the same strike price.

Systematic Risk: Market risk due to factors that cannot be eliminated by diversification.

Systemic Risk: The risk that a default by one market participant will have repercussions on other participants due to the interlocking nature of financial markets. For example, Customer A’s default in X market may affect Intermediary B’s ability to fulfill its obligations in Markets X, Y, and Z.

T

Taker: The buyer of an option contract.

TAS: See Trading at Settlement.

T-Bond: See Treasury Bond.

Technical Analysis: An approach to forecasting commodity prices that examines patterns of price change, rates of change, and changes in volume of trading and open interest, without regard to underlying fundamental market factors. Technical analysis can work consistently only if the theory that price movements are a random walk is incorrect. See Fundamental Analysis.

TED Spread: (1) The difference between the interest rate on three-month U.S. Treasury bills and three-month LIBOR; (2) the difference between the price of the three-month U.S. Treasury bill futures contract and the price of the three-month Eurodollar time deposit futures contract with the same expiration month (Treasury Over Eurodollar).

Tender: To give notice to the clearing organization of the intention to initiate delivery of the physical commodity in satisfaction of a short futures contract. Also see Retender.

Tenderable Grades: See Contract Grades.
Terminal Elevator: An elevator located at a point of greatest accumulation in the movement of agricultural products that stores the commodity or moves it to processors.

Terminal Market: Usually synonymous with commodity exchange or futures market, specifically in the United Kingdom.

TIBOR (Tokyo Interbank Offered Rate): A daily reference rate based on the interest rates at which banks offer to lend unsecured funds to other banks in the Japan wholesale money market (or interbank market). TIBOR is published daily by the Japanese Bankers Association (JBA). See EURIBOR, LIBOR.

Tick: Refers to a minimum change in price up or down. An up-tick means that the last trade was at a higher price than the one preceding it. A down-tick means that the last price was lower than the one preceding it. See Minimum Price Fluctuation.

Time Decay: The tendency of an option to decline in value as the expiration date approaches, especially if the price of the underlying instrument is exhibiting low volatility. See Time Value.

Time-of-Day Order: This is an order that is to be executed at a given minute in the session. For example, “Sell 10 March corn at 12:30 p.m.”

Time Spread: The selling of a nearby option and buying of a more deferred option with the same strike price. Also called Horizontal Spread.

Time Value: That portion of an option’s premium that exceeds the intrinsic value. The time value of an option reflects the probability that the option will move into-the-money. Therefore, the longer the time remaining until expiration of the option, the greater its time value. Also called Extrinsic Value.

Total Return Swap: A type of credit derivative in which one counterparty receives the total return (interest payments and any capital gains or losses) from a specified reference asset and the other counterparty receives a specified fixed or floating cash flow that is not related to the creditworthiness of the reference asset. Also called total rate of return swap, or TR swap.

To-Arrive Contract: A transaction providing for subsequent delivery within a stipulated time limit of a specific grade of a commodity.

Trade Option: A commodity option transaction in which the purchaser is reasonably believed by the writer to be engaged in business involving use of that commodity or a related commodity.

Trader: (1) A merchant involved in cash commodities; (2) a professional speculator who trades for his own account and who typically holds exchange trading privileges.

Trading Ahead: See Front Running.

Trading Arcade: A facility, often operated by a clearing member that clears trades for locals, where e-locals who trade for their own account can gather to trade on an electronic trading facility (especially if the exchange is all-electronic and there is no pit or ring).
Trading at Settlement (TAS): An exchange rule which permits the parties to a futures trade during a trading day to agree that the price of the trade will be that day’s settlement price (or the settlement price plus or minus a specified differential).

Trading Facility: A person or group of persons that provides a physical or electronic facility or system in which multiple participants have the ability to execute or trade agreements, contracts, or transactions by accepting bids and offers made by other participants in the facility or system. See Many-to-Many.

Trading Floor: A physical trading facility where traders make bids and offers via open outcry or the specialist system.

Transaction: The entry or liquidation of a trade.

Transfer Trades: Entries made upon the books of futures commission merchants for the purpose of: (1) transferring existing trades from one account to another within the same firm where no change in ownership is involved; (2) transferring existing trades from the books of one FCM to the books of another FCM where no change in ownership is involved. Also called Ex-Pit transactions.

Transferable Option (or Contract): A contract that permits a position in the option market to be offset by a transaction on the opposite side of the market in the same contract.

Transfer Notice: A term used on some exchanges to describe a notice of delivery. See Retender.

Treasury Bills (or T-Bills): Short-term zero coupon U.S. government obligations, generally issued with various maturities of up to one year.

Treasury Bonds (or T-Bonds): Long-term (more than ten years) obligations of the U.S. government that pay interest semiannually until they mature, at which time the principal and the final interest payment is paid to the investor.

Treasury Notes: Same as Treasury bonds except that Treasury notes are medium-term (more than one year but not more than ten years).

Trend: The general direction, either upward or downward, in which prices have been moving.

Trendline: In charting, a line drawn across the bottom or top of a price chart indicating the direction or trend of price movement. If up, the trendline is called bullish; if down, it is called bearish.

UV

Unable: All orders not filled by the end of a trading day are deemed “unable” and void, unless they are designated GTC (Good Until Canceled) or open.

Uncovered Option: See Naked Option.

Underlying Commodity: The cash commodity underlying a futures contract. Also, the commodity or futures contract on which a commodity option is based, and which must be accepted or delivered if the option is exercised.
Variable Price Limit: A price limit schedule, determined by an exchange, that permits variations above or below the normally allowable price movement for any one trading day.

Variation Margin: Payment made on a daily or intraday basis by a clearing member to the clearing organization based on adverse price movement in positions carried by the clearing member, calculated separately for customer and proprietary positions.

Vault Receipt: A document indicating ownership of a commodity stored in a bank or other depository and frequently used as a delivery instrument in precious metal futures contracts.

Vega: Coefficient measuring the sensitivity of an option value to a change in volatility.

Vertical Spread: Any of several types of option spread involving the simultaneous purchase and sale of options of the same class and expiration date but different strike prices, including bull vertical spreads, bear vertical spreads, back spreads, and front spreads. See Horizontal Spread and Diagonal Spread.

Visible Supply: Usually refers to supplies of a commodity in licensed warehouses. Often includes floats and all other supplies “in sight” in producing areas. See Invisible Supply.

Volatility: A statistical measurement (the annualized standard deviation of returns) of the rate of price change of a futures contract, security, or other instrument underlying an option. See Historical Volatility, Implied Volatility.

Volatility Quote Trading: Refers to the quoting of bids and offers on option contracts in terms of their implied volatility rather than as prices.

Volatility Spread: A delta-neutral option spread designed to speculate on changes in the volatility of the market rather than the direction of the market.

Volatility Trading: Strategies designed to speculate on changes in the volatility of the market rather than the direction of the market.

Volume: The number of contracts traded during a specified period of time. It is most commonly quoted as the number of contracts traded, but for some physical commodities may be quoted as the total of physical units, such as bales, bushels, or barrels.

Volume Weighted Average Price (VWAP): A method of determining the settlement price in certain futures contracts. It is the average futures transaction price, weighted by volume, during a specified period of time.

WXYZ

Warehouse Receipt: A document certifying possession of a commodity in a licensed warehouse that is recognized for delivery purposes by an exchange.

Warrant: An issuer-based product that gives the buyer the right, but not the obligation, to buy (in the case of a call) or to sell (in the case of a put) a stock or a commodity at a set price during a specified period.
Warrant or Warehouse Receipt for Metals: Certificate of physical deposit, which gives title to physical metal in an exchange-approved warehouse.

Wash Sale: See Wash Trading.

Wash Trading: Entering into, or purporting to enter into, transactions to give the appearance that purchases and sales have been made, without incurring market risk or changing the trader's market position. The Commodity Exchange Act prohibits wash trading. Also called Round Trip Trading, Wash Sales.

Weak Hands: When used in connection with delivery of commodities on futures contracts, the term usually means that the party probably does not intend to retain ownership of the commodity; when used in connection with futures positions, the term usually means positions held by small speculators.

Weather Derivative: A derivative whose payoff is based on a specified weather event, for example, the average temperature in Chicago in January. Such a derivative can be used to hedge risks related to the demand for heating fuel or electricity.

Wild Card Option: Refers to a provision of any physical delivery Treasury bond or Treasury note futures contract that permits shorts to wait until as late as 8:00 p.m. Chicago time on any notice day to announce their intention to deliver at invoice prices that are fixed at 2:00 p.m., the close of futures trading, on that day.

Winter Wheat: Wheat that is planted in the fall, lies dormant during the winter, and is harvested beginning about May of the next year.

Writer: The issuer, grantor, or seller of an option contract.

Yield Curve: A graphic representation of market yield for a fixed income security plotted against the maturity of the security. The yield curve is positive when long-term rates are higher than short-term rates.

Yield to Maturity: The rate of return an investor receives if a fixed income security is held to maturity.

Zero Coupon: Refers to a debt instrument that does not make coupon payments, but, rather, is issued at a discount to par and redeemed at par at maturity.
The International Energy Agency (IEA) makes every attempt to ensure, but does not guarantee, the accuracy and completeness of the information or the clarity of content of the Oil Market Report (hereafter the OMR). The IEA shall not be liable to any party for any inaccuracy, error or omission contained or provided in this OMR or for any loss, or damage, whether or not due to reliance placed by that party on information in this OMR.

The Executive Director and Secretariat of the IEA are responsible for the publication of the OMR. Although some of the data are supplied by IEA Member-country governments, largely on the basis of information they in turn receive from oil companies, neither these governments nor these oil companies necessarily share the Secretariat’s views or conclusions as expressed in the OMR. The OMR is prepared for general circulation and is distributed for general information only. Neither the information nor any opinion expressed in the OMR constitutes an offer, or an invitation to make an offer, to buy or sell any securities or any options, futures or other derivatives related to such securities.

This OMR is the copyright of the OECD/IEA and is subject to terms and conditions of use. These terms and conditions are available on the IEA website at http://www.iea.org/oilmar/licenceomr.html. In relation to the Subscriber Edition (as defined in the OMR’s online terms and conditions), the spot crude and product price assessments are based on daily Platts prices, converted when appropriate to US$ per barrel according to the Platts specification of products (© Platts – a division of McGraw-Hill Inc.). The graphs marked ‘Source: Platts’ are also based on Platts data. Any reproduction of information from the spot crude and product price tables, or of the graphs marked ‘Source: Platts’ requires the prior permission of Platts.
User’s Guide and Glossary to the IEA Oil Market Report

For information on the data sources, definitions, technical terms and general approach used in preparing the Oil Market Report (OMR), Medium-Term Oil and Gas Markets (MTOGM) and Annual Statistical Supplement (current issue of the Statistical Supplement dated 11 August 2010), readers are referred to the User’s Guide at www.oilmarketreport.org/glossary.asp. It should be noted that the spot crude and product price assessments are based on daily Platts prices, converted when appropriate to US$ per barrel according to the Platts specification of products (© 2011 Platts - a division of McGraw-Hill Inc.).

The Oil Market Report is published under the responsibility of the Executive Director and Secretariat of the International Energy Agency. Although some of the data are supplied by Member-country Governments, largely on the basis of information received from oil companies, neither governments nor companies necessarily share the Secretariat’s views or conclusions as expressed therein. © OECD/IEA 2011