As the world’s largest and most diverse derivatives marketplace, CME Group is where the world comes to manage risk. CME Group exchanges – CME, CBOT, NYMEX and COMEX – offer the widest range of global benchmark products across all major asset classes, including futures and options based on interest rates, equity indexes, foreign exchange, energy, agricultural commodities, metals, weather and real estate. CME Group brings buyers and sellers together through its CME Globex electronic trading platform and its trading facilities in New York and Chicago. CME Group also operates CME Clearing, one of the largest central counterparty clearing services in the world, which provides clearing and settlement services for exchange-traded contracts, as well as for over-the-counter derivatives transactions through CME ClearPort. These products and services ensure that businesses everywhere can substantially mitigate counterparty credit risk in both listed and over-the-counter derivatives markets.
The Metals Risk Management Marketplace

Because metals markets are highly responsive to overarching global economic and geopolitical influences, they present a unique risk management tool for commercial and institutional firms as well as a unique, exciting and potentially rewarding opportunity for individuals who seek to profit by correctly anticipating price changes.

Our metals futures markets include full-size contracts on gold, silver, platinum, palladium, copper and steel; and smaller-size contracts for gold (miNY 50 oz.), silver (miNY 2,500 oz.), and copper (E-mini 12,500 lbs.). These markets combine a unique volatility trading opportunity with an effective means for risk management. And with average daily volume of approximately 300,000 futures and options contracts traded, our metals markets offer extensive trading opportunities for these products. In addition, we’ve recently launched a new clearing service – Cleared OTC London Gold Forwards. This service provides centralized clearing, settlement and delivery for OTC London unallocated gold forwards, with execution remaining in the OTC market.

This document highlights 12 option strategies that allow traders to take advantage of a variety of market conditions, ranging from bearish to bullish and volatile to stable. These strategies are just a sampling of the many trading opportunities available in our Metals product suite.

The hypothetical trades that follow look at market position, market objective, profit/loss potential, deltas and other information associated with the 12 strategies. The trading examples use our Gold, Silver or Copper options on futures. Although these examples are for educational purposes and are not intended to be construed as trading advice or recommendations, they do, however, offer a glimpse of the vast number of trading opportunities that await you with these products, making our Metals Complex “Your Flexible Choice.”

We offer you a suite of options on our standard Gold, Silver and Copper futures, with the safety and security of the world’s largest regulated derivatives marketplace. Options on futures offer traders additional tools to express their opinion in a market, as well as flexibility in managing price risk as a form of insurance. They give the buyer of an options contract the right, but not the obligation, to buy (a call option) or sell (a put option) the underlying futures contract at a specific price and time, allowing participation in favorable price moves. If the market moves against the options position, the holder can let it expire worthless, with the only cost being the premium paid. Our metals options have American-style expiration. American-style is a type of option contract that can be exercised at the buyer’s discretion on any trading day up to and including the expiration date and is exercisable to futures.

Our Metals Product Suite

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**Precious**
- Gold futures (GC) and options (OG)
- miNY Gold futures (QO)
- Silver futures (SI) and options (SO)
- miNY Silver futures (QI)
- Platinum futures (PL) and options (PO)
- Palladium futures (PA)

**Base**
- Copper futures (HG) and options (HX)
- E-mini Copper futures (QC)

**Ferrous**
- HRC Steel futures (HR)

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The trading strategies examples on the following pages do not include transaction fees. All applicable transaction fees should be considered when evaluating strategies.
Below are the basic futures strategies of long and short as a reference.

### LONG FUTURES
Long Gold Futures @ $1,000

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Long Futures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Opinion</strong></td>
<td>Bullish</td>
</tr>
<tr>
<td><strong>Market Position</strong></td>
<td>Buy futures</td>
</tr>
<tr>
<td><strong>Option Strategy</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Debit/Credit</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Profit Potential</strong></td>
<td>Unlimited</td>
</tr>
<tr>
<td><strong>Profit Point</strong></td>
<td>Any futures price above the price at which the position was initiated</td>
</tr>
<tr>
<td><strong>Loss Potential</strong></td>
<td>Unlimited except to the extent that the futures price cannot fall below zero</td>
</tr>
<tr>
<td><strong>Loss Point</strong></td>
<td>Any futures price below the price at which the position was initiated</td>
</tr>
<tr>
<td><strong>Break-Even Point</strong></td>
<td>Futures price at which the position was initiated</td>
</tr>
<tr>
<td><strong>Margin Required</strong></td>
<td>Yes</td>
</tr>
</tbody>
</table>

### SHORT FUTURES
Short Silver Futures @ $17.00

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Short Futures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Opinion</strong></td>
<td>Bearish</td>
</tr>
<tr>
<td><strong>Market Position</strong></td>
<td>Sell futures</td>
</tr>
<tr>
<td><strong>Option Strategy</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Debit/Credit</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Profit Potential</strong></td>
<td>Unlimited except to the extent that the futures price cannot fall below zero</td>
</tr>
<tr>
<td><strong>Profit Point</strong></td>
<td>Any futures price below the price at which the position was initiated</td>
</tr>
<tr>
<td><strong>Loss Potential</strong></td>
<td>Unlimited</td>
</tr>
<tr>
<td><strong>Loss Point</strong></td>
<td>Any futures price above the price at which the position was initiated</td>
</tr>
<tr>
<td><strong>Break-Even Point</strong></td>
<td>Futures price at which the position was initiated</td>
</tr>
<tr>
<td><strong>Margin Required</strong></td>
<td>Yes</td>
</tr>
</tbody>
</table>

All examples throughout this guide use various strike prices assuming that the underlying contract is trading at the following prices: $1,000 Gold futures, $17.00 Silver futures and $3.00 Copper futures.
LONG CALL
Long $3.00 Copper Call @ $0.20/Lb.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Long Call</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Opinion</td>
<td>Bullish</td>
</tr>
<tr>
<td>Market Position</td>
<td>Buy a call</td>
</tr>
<tr>
<td>Option Strategy</td>
<td>Debit premium paid</td>
</tr>
<tr>
<td>Debit/Credit</td>
<td></td>
</tr>
<tr>
<td>Profit Potential</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Profit Point</td>
<td>Any futures price above the strike price plus premium paid</td>
</tr>
<tr>
<td>Loss Potential</td>
<td>Limited to premium paid</td>
</tr>
<tr>
<td>Loss Point</td>
<td>The maximum loss point is any futures price at or below the strike price</td>
</tr>
<tr>
<td>Break-Even Point</td>
<td>Strike price + premium paid</td>
</tr>
<tr>
<td>Margin Required</td>
<td>No</td>
</tr>
</tbody>
</table>

LONG PUT
Long $1,000 Gold Put @ $25/Ounce

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Long Put</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Opinion</td>
<td>Bearish</td>
</tr>
<tr>
<td>Market Position</td>
<td>Buy a put</td>
</tr>
<tr>
<td>Option Strategy</td>
<td>Debit premium paid</td>
</tr>
<tr>
<td>Debit/Credit</td>
<td></td>
</tr>
<tr>
<td>Profit Potential</td>
<td>Unlimited except to the extent that the futures price cannot fall below zero</td>
</tr>
<tr>
<td>Profit Point</td>
<td>Any futures price below the strike price minus premium paid</td>
</tr>
<tr>
<td>Loss Potential</td>
<td>Limited to premium paid</td>
</tr>
<tr>
<td>Loss Point</td>
<td>The maximum loss point is any futures price at or above the strike price</td>
</tr>
<tr>
<td>Break-Even Point</td>
<td>Strike price – premium paid</td>
</tr>
<tr>
<td>Margin Required</td>
<td>No</td>
</tr>
</tbody>
</table>

All examples throughout this guide use various strike prices assuming that the underlying contract is trading at the following prices: $1,000 Gold futures, $17.00 Silver futures and $3.00 Copper futures.
**SHORT CALL**

**Short $17.00 Silver Call @ $0.50/Ounce**

- **Market Opinion**: Neutral to slightly Bearish
- **Market Position**: Sell a call
- **Option Strategy**: Credit premium received
- **Profit Potential**: Limited to premium received
- **Profit Point**: Maximum profit point is any futures price at or below the strike price
- **Loss Potential**: Unlimited
- **Loss Point**: Any futures price above the strike price plus the premium received
- **Break-Even Point**: Strike price + premium received
- **Margin Required**: Yes

**SHORT PUT**

**Short $3.00 Copper Put @ $0.20/Lb.**

- **Market Opinion**: Neutral to slightly Bullish
- **Market Position**: Sell a put
- **Option Strategy**: Credit premium received
- **Profit Potential**: Limited to premium received
- **Profit Point**: Maximum profit point is any futures price at or above the strike price
- **Loss Potential**: Unlimited except to the extent that the futures price cannot fall below zero
- **Loss Point**: Any futures price below the strike price plus the premium received
- **Break-Even Point**: Strike price – premium received
- **Margin Required**: Yes

---

All examples throughout this guide use various strike prices assuming that the underlying contract is trading at the following prices:

- $1,000 Gold futures
- $17.00 Silver futures
- $3.00 Copper futures
BULL CALL SPREAD
Long $975 Gold Call @ $45/Ounce
Short $1,025 Gold Call @ $20/Ounce

BULL PUT SPREAD
Long $16.50 Silver Put @ $0.50/Ounce
Short $17.50 Silver Put @ $1.00/Ounce

Strategy | Bull Call Spread  
--- | ---  
Market Opinion | Bullish  
Market Position | Buy a lower strike price call and sell a higher strike price call on the same commodity with the same expiration date  
Option Strategy Debit/Credit | Net debit premium received is less than premium paid  
Profit Potential | Limited to the difference between the strike prices minus the net debit  
Profit Point | Any futures price above the lower strike price plus net debit; maximum profit point is any futures price at or above the higher strike price  
Loss Potential | Limited to the net debit  
Loss Point | Any futures price below the lower strike price plus the net debit; maximum loss point is any futures price at or below the lower strike price  
Break-Even Point | Lower strike price + net debit  
Margin Required | Upfront payment of net debit  

Strategy | Bull Put Spread  
--- | ---  
Market Opinion | Bullish  
Market Position | Buy a lower strike price put and sell a higher strike price put on the same commodity with the same expiration date  
Option Strategy Debit/Credit | Net credit premium received is greater than premium paid  
Profit Potential | Limited to the net credit  
Profit Point | Maximum profit point is any futures price at or above the higher strike price  
Loss Potential | Limited to the difference between the strike prices minus the net credit  
Loss Point | Maximum loss point is any futures price at or below the lower strike price  
Break-Even Point | Higher strike price - net credit  
Margin Required | Yes

All examples throughout this guide use various strike prices assuming that the underlying contract is trading at the following prices: $1,000 Gold futures, $1700 Silver futures and $3.00 Copper futures.
BEAR CALL SPREAD
Short $2.80 Copper Call @ $0.30/Lb.
Long $3.20 Copper Call @ $0.10/Lb.

BEAR PUT SPREAD
Short $975 Gold Put @ $15/Ounce
Long $1,025 Gold Put @ $40/Ounce

Strategy   Bear Call Spread
Market Opinion  Bearish
Market Position  Sell a lower strike price call and buy a higher strike price call on the same commodity with the same expiration date
Option Strategy Debit/Credit  Net credit premium received is greater than premium paid
Profit Potential  Limited to the net credit
Profit Point  Maximum profit point is any futures price at or below the lower strike price
Loss Potential  Limited to the difference between the strike prices minus the net credit
Loss Point  Maximum loss point is any futures price at or above the higher strike price
Break-Even Point  Lower strike price + net credit
Margin Required  Yes

Strategy   Bear Put Spread
Market Opinion  Bearish
Market Position  Sell a lower strike price put and buy a higher strike price put on the same commodity with the same expiration date
Option Strategy Debit/Credit  Net debit premium received is less than premium paid
Profit Potential  Limited to the difference between the strike prices minus the net debit
Profit Point  Maximum profit point is any futures price at or below the lower strike price
Loss Potential  Limited to the net debit
Loss Point  Maximum loss point is any futures price at or above the higher strike price
Break-Even Point  Higher strike price – net debit
Margin Required  No

All examples throughout this guide use various strike prices assuming that the underlying contract is trading at the following prices:
$1,000 Gold futures, $17.00 Silver futures and $3.00 Copper futures.
### Long Straddle

**Market Opinion**
Extreme price volatility in either direction

**Market Position**
Buy a call and buy a put on the same commodity with the same expiration date and strike price

**Option Strategy**
Debit/Credit
Net debit (premium is paid on both options)

**Profit Potential**
Unlimited except to the extent that the futures price cannot fall below zero

**Profit Point**
Put strike price minus the net debit or the call strike price plus the net debit

**Loss Potential**
Limited to the net debit

**Loss Point**
The strike price plus or minus the net debit; maximum loss point is when the futures price equals the strike price

**Break-Even Point**
Two break-even points strike price + net debit or strike price – net debit

**Margin Required**
No

### Short Straddle

**Market Opinion**
Neutral or stable

**Market Position**
Sell a call and sell a put on the same commodity with the same expiration date and strike price

**Option Strategy**
Debit/Credit
Net credit premium received is greater than premium paid

**Profit Potential**
Limited to the net credit

**Profit Point**
Maximum profit point is the futures price at the strike price

**Loss Potential**
Unlimited except to the extent that the futures price cannot fall below zero

**Loss Point**
Strike price plus or minus the net credit

**Break-Even Point**
Two break-even points strike price + net credit or strike price – net credit

**Margin Required**
Yes

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All examples throughout this guide use various strike prices assuming that the underlying contract is trading at the following prices: $1,000 Gold futures, $17.00 Silver futures and $3.00 Copper futures.
LONG BUTTERFLY
Short Two $17.00 Silver Call @ $0.50/Ounce
Long $16.50 Silver Call @ $0.90/Ounce
Long $17.50 Silver Call @ $0.40/Ounce

Strategy
Market Opinion
Neutral or stable
Market Position
Sell two calls at the middle strike price, buy a call with lower strike price and buy a call with higher strike price on the same commodity with the same expiration date
Option Strategy
Debit/Credit
Net debit premium received is less than premium paid
Profit Potential
Limited to the difference between middle strike price and lower strike price minus the net debit
Profit Point
Any futures price above the lower strike price plus the net debit and below the higher strike price minus the net debit; maximum profit point is when the futures price equals the middle strike price
Loss Potential
Limited to the net debit
Loss Point
Any futures price that is less than the lower strike price plus the net debit or greater than the higher strike price minus the net debit; maximum loss point is when the futures price at or below (above) the lower (higher) strike price
Break-Even Point
Two break-even points lower strike price + net debit or higher strike price - net debit
Margin Required
Upfront payment of net debit

SHORT BUTTERFLY
Long Two $1,000 Gold Call @ $25/Ounce
Short $975 Gold Call @ $45/Ounce
Short $1,025 Gold Call @ $20/Ounce

Strategy
Market Opinion
Extreme price volatility
Market Position
Buy two calls, sell a call with lower strike price and sell a call with higher strike price on the same commodity with the same expiration date
Option Strategy
Debit/Credit
Net credit premium received is greater than premium paid
Profit Potential
Limited to the net credit
Profit Point
Any futures price that is less than the lower strike price plus the net credit and greater than the higher strike price plus the net credit; maximum profit point is any futures price at or below (above) the lower (higher) strike price
Loss Potential
Limited to the difference between middle strike price and lower strike price minus the net credit
Loss Point
Any futures price above the lower strike price plus the net credit and below the higher strike price minus the net credit; maximum loss point is when the futures price equals the middle strike price
Break-Even Point
Two break-even points lower strike price + net credit or higher strike price - net credit
Margin Required
Yes

All examples throughout this guide use various strike prices assuming that the underlying contract is trading at the following prices:
$1,000 Gold futures, $17.00 Silver futures and $3.00 Copper futures.
### Options Contract Specifications

<table>
<thead>
<tr>
<th></th>
<th>GOLD OPTIONS</th>
<th>SILVER OPTIONS</th>
<th>COPPER OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contract Unit</strong></td>
<td>One COMEX Gold futures contract</td>
<td>One COMEX Silver futures contract</td>
<td>One COMEX Copper futures contract</td>
</tr>
<tr>
<td><strong>Product Symbol</strong></td>
<td>OG</td>
<td>SO</td>
<td>HX</td>
</tr>
<tr>
<td><strong>Venue</strong></td>
<td>CME Globex, CME ClearPort, Open Outcry (New York)</td>
<td>CME Globex, CME ClearPort, Open Outcry (New York)</td>
<td>CME Globex, CME ClearPort, Open Outcry (New York)</td>
</tr>
<tr>
<td><strong>Hours (All Times are New York Time/ET)</strong></td>
<td>CME Globex: Sunday – Friday 6:00 p.m. – 5:15 p.m. (5:00 p.m. – 4:15 p.m. Chicago Time/CT) with a 45-minute break each day beginning at 5:15 p.m. (4:15 p.m. CT)</td>
<td>CME Globex: Sunday – Friday 6:00 p.m. – 5:15 p.m. (5:00 p.m. – 4:15 p.m. Chicago Time/CT) with a 45-minute break each day beginning at 5:15 p.m. (4:15 p.m. CT)</td>
<td>CME Globex: Sunday – Friday 6:00 p.m. – 5:15 p.m. (5:00 p.m. – 4:15 p.m. Chicago Time/CT) with a 45-minute break each day beginning at 5:15 p.m. (4:15 p.m. CT)</td>
</tr>
<tr>
<td></td>
<td>CME ClearPort: Sunday – Friday 6:00 p.m. – 5:15 p.m. (5:00 p.m. – 4:15 p.m. Chicago Time/CT) with a 45-minute break each day beginning at 5:15 p.m. (4:15 p.m. CT)</td>
<td>CME ClearPort: Sunday – Friday 6:00 p.m. – 5:15 p.m. (5:00 p.m. – 4:15 p.m. Chicago Time/CT) with a 45-minute break each day beginning at 5:15 p.m. (4:15 p.m. CT)</td>
<td>CME ClearPort: Sunday – Friday 6:00 p.m. – 5:15 p.m. (5:00 p.m. – 4:15 p.m. Chicago Time/CT) with a 45-minute break each day beginning at 5:15 p.m. (4:15 p.m. CT)</td>
</tr>
<tr>
<td><strong>Open outcry</strong></td>
<td>Monday – Friday 8:20 a.m. – 1:30 p.m. (7:20 a.m. – 12:30 p.m. CT)</td>
<td>Monday – Friday 8:25 a.m. – 1:25 p.m. (7:25 a.m. – 12:25 p.m. CT)</td>
<td>Monday – Friday 8:10 a.m. – 1:00 p.m. (7:10 a.m. – 12:00 p.m. CT)</td>
</tr>
<tr>
<td><strong>Price Quotation</strong></td>
<td>U.S. dollars and cents per troy ounce</td>
<td>U.S. cents per troy ounce</td>
<td>U.S. cents per pound</td>
</tr>
<tr>
<td><strong>Option Style</strong></td>
<td>American</td>
<td>American</td>
<td>American</td>
</tr>
<tr>
<td><strong>Minimum Fluctuation</strong></td>
<td>$0.10 per troy ounce</td>
<td>Outright transactions including EFP: $0.005 per troy ounce; Straddle or spread transactions and settlement prices: $0.001 per troy ounce</td>
<td>$0.0005 per pound</td>
</tr>
<tr>
<td><strong>Expiration of Trading</strong></td>
<td>Trading terminates on the fourth business day prior to the underlying futures delivery month. If the expiration day falls on a Friday or immediately prior to an Exchange holiday, expiration will occur on the previous business day.</td>
<td>Trading terminates on the fourth business day prior to the underlying futures delivery month. If the expiration day falls on a Friday or immediately prior to an Exchange holiday, expiration will occur on the previous business day.</td>
<td>Trading terminates on the fourth business day prior to the underlying futures delivery month. If the expiration day falls on a Friday or immediately prior to an Exchange holiday, expiration will occur on the previous business day.</td>
</tr>
<tr>
<td><strong>Listed Contracts</strong></td>
<td>Trading is conducted in the nearest six of the following contract months: February, April, June, August, October and December. Additional contract months – January, March, May, July, September and November – will be listed for trading for a period of two months. A 60-month options contract is added from the current calendar month on a June–December cycle.</td>
<td>Trading is conducted in the nearest five of the following contract months: March, May, July, September and December. Additional contract months – January, February, April, June, August, October and November – will be listed for trading for a period of two months. A 60-month options contract is added from the current calendar month on a July–December cycle.</td>
<td>Trading is conducted in each of the nearest 22 futures contract months.</td>
</tr>
<tr>
<td><strong>Strike Prices</strong></td>
<td>Ten strikes at $10.00 increments above the twentieth $5.00 increment above the at-the-money strike price and ten below the twentieth $5.00 increment below the at-the-money; and an additional eight $25.00 strike price increments above the tenth $10 increment above the at-the-money strike price and eight $25.00 strike price increments below the at-the-money strike price.</td>
<td>Strike prices for silver option contracts for all contract months are at an interval of five cents ($0.05).</td>
<td>Strike prices for all copper option contracts for all contract months are at an interval of one cent ($0.01).</td>
</tr>
<tr>
<td><strong>Settlement Type</strong></td>
<td>Physical</td>
<td>Physical</td>
<td>Physical</td>
</tr>
<tr>
<td><strong>Rulebook Chapter</strong></td>
<td>115</td>
<td>116</td>
<td>117</td>
</tr>
</tbody>
</table>

These contracts are listed with, and subject to, the rules and regulations of NYMEX.

### Summary:

In addition to the strategies included in this publication, there are many other strategies using our Metals futures and options that can meet your needs and market expectations. Contact your broker to discuss your flexible choices.

For more information on our Metals markets, visit [www.cmegroup.com/metals](http://www.cmegroup.com/metals).
Glossary:

**American-Style Option:**
Type of option contract that can be exercised at the buyer's discretion on any trading day up to and including the expiration date. This differs from a European-style option, which may only be exercised on its expiration date.

**Assignment (Options):**
The process by which the CME clearing house, in response to a long exercising its option, randomly selects a seller to fulfill its obligation to buy or sell the underlying futures contract at its strike price. The assigned seller of a put must buy the underlying futures contract; the assigned seller of a call must sell the underlying futures contract.

**At-the-Money Option:**
An option with a strike price that is equal, or closest to the current market price of the underlying futures contract.

**Automatic Exercise:**
Following options expiration, an option which is in-the-money is exercised automatically by the clearinghouse, unless the holder of the option submits specific instructions to the contrary. Please refer to individual contract specifications for Automatic Exercise guidelines.

**Backspreads:**
Selling one or more at-the-money options and buying a larger number of out-of-the-money options. Backspreads may generate trading profits if implied volatility increases and/or the underlying instrument's price moves sufficiently in the anticipated direction.

**Bear Spread (Options):**
A vertical spread involving the sale of the lower strike call and the purchase of the higher strike call, called a bear call spread. Also, a vertical spread involving the sale of the lower strike put and the purchase of the higher strike put, called a bear put spread.

**Break-even:**
The point at which an option buyer or seller experiences no loss and no profit on an option. The break-even of a call option equals the strike price plus the premium; the break-even of a put option equals the strike price minus the premium.

**Butterfly Options Spread:**
A three-legged option spread in which each leg has the same expiration date but different strike prices.

**Calendar Spread (Options):**
The simultaneous purchase and sale of options on futures contracts of the same strike price, but different expiration dates.

**Call Option:**
A contract between a buyer and seller in which the buyer pays a premium and acquires the right, but not the obligation, to purchase a specified futures contract at the strike price on or prior to expiration. The seller receives a premium and is obligated to deliver, or sell, the futures contract at the specified strike price should a buyer elect to exercise the option. Also see American-style Option and European-style Option.

**Covered Call:**
Position where a call option is sold in concert with a long position in the futures contract.

**European-style Option:**
Type of option contract which can only be exercised on expiration date.

**Exercise:**
To invoke the right granted under the terms of an options contract to buy or sell the underlying futures contract. The option holder (long) is the one who exercises the option. Call holders exercise the right to buy the underlying future, while put holders exercise the right to sell the underlying future. The short option holder is assigned a position opposite to that of the option buyer. CME Clearing removes the option and creates the futures positions on the firms' books on the day of exercise.

**Exercise Or Strike Price:**
The price at which the buyer of a call can purchase the commodity during the life of the option, and the price at which the buyer of a put can sell the commodity during the life of the option.

**Exercise Notice:**
A notice tendered by a brokerage firm informing the CME clearing house that the holder of the option would like to exchange their option for the underlying futures contract.
**Fair Value (Options):**
Generally refers to the market price of an option being in line with its theoretical value as predicted by an options pricing formula. Such as Black-Scholes, Cox-Ross-Rubenstein, Haug, and numerous other pricing models.

**Flex Option:**
Non-standard option in which the buyer and seller can agree to terms where the strike price may exceed the eligible range of standard strikes, the expiration date can be any business date other than the standard expiration date, or the option can be defined to expire as “American” or “European”-style and the option can have any listed futures as its underlying.

**Historical Volatility:**
The volatility of a financial instrument based on historical returns. This phrase is used particularly when it is wished to distinguish between the actual volatility of an instrument in the past, and the current volatility implied by the market.

**Horizontal Spread:**
The purchase of either a call or put option and the simultaneous sale of the same type of option with typically the same strike price but with a different expiration month. Also referred to as a calendar spread.

**Implied Volatility:**
The volatility implied by the market price of the option based on an option pricing model. In other words, it is the volatility that, given a particular pricing model, yields a theoretical value for the option equal to the current market price.

**Intrinsic Value:**
The relationship of an option’s in-the-money strike price to the current futures price. For a put: strike price minus futures price. For a call: futures price minus strike price.

**In-The-Money:**
A call option with a strike price lower (or a put option with a strike price higher) than the current market value of the underlying futures commodity. Therefore someone who exercised their option on a future would receive a futures position that was already “in the money”. 

**Naked Options Position:**
An open options contract that is not covered by an offsetting position in the underlying futures commodity or by another options contract against which it can be spread.

**Option Contract:**
A contract that gives the bearer the right, but not the obligation, to be long or short a futures contract at a specified price within a specified time period. The specified price is called the strike price. The futures contract that the long may establish by exercising the option is referred to as the underlying futures contract.

**Option buyer:**
One who purchases an option and pays a premium.

**Option Greeks:**
Letters assigned to specific sensitivities of options price behavior based on statistical models. Each letter refers to expected option price changes given certain underlying price and/or volatility moves. The most common are delta, gamma, theta, omega (or vega) and rho.

**Option premium:**
The price a buyer pays for an option. Premiums are arrived at through open competition between buyers and sellers.

**Option seller (writer):**
One who sells an option and receives a premium.

**Options series:**
All options of the same class which share a common strike price.

**Out-of-the-money:**
A term used to describe an option that has no intrinsic value. A call option with a strike price higher (or a put with a strike price lower) than the current market value of the underlying futures commodity. Since it depends on current prices, an option can vary from in the money to out of the money with market price movements during the life of the options contract.

**Over-the-counter (OTC) market:**
A market in which custom-tailored contracts such as stocks, commodities, currencies, interest rates and a wide range of derivatives are bought and sold between counterparties but are not exchange-traded.

**Pin Risk:**
Typically at expiration, the risk to a trader who has sold an option that has a strike price identical to, or pinned to, the current price of the underlying futures price. In this case, the trader will not know whether he will be required to assume his options obligations until notified from their clearing house.
Premium:
The price paid by the purchaser of an option to the grantor (seller).

Put Option:
A contract that provides the purchaser the right (but not the obligation) to sell a futures contract at an agreed price (the strike price) at any time during the life of the option. A put option is purchased in the expectation of a decline in price.

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.

Serial Options:
Options for months for which there are no futures contracts. The underlying futures contract for a serial option month would be the next nearby futures contract.

Straddle:
The purchase or sale of an equal number of puts and calls, with the same strike price and expiration dates. A long straddle is a straddle in which a long position is taken in both a put and a call option. A short straddle is a straddle in which a short position is taken in both a put and a call option.

Strangle:
The purchase of a put and a call, in which the options have the same expiration and the put strike is lower than the call strike, called a long strangle. Also the sale of a put and a call, in which the options have the same expiration and the put strike is lower than the call strike, called a short strangle.

Strike Price:
The price at which the buyer of an option may choose to exercise his right to purchase or sell the underlying futures contract. See also exercise price.

Synthetic Call Option:
A combination of a long futures contract and a long put, called a synthetic long call. Also, a combination of a short futures contract and a short put, called a synthetic short call.

Synthetic Put Option:
A combination of a short futures contract and a long call, called a synthetic long put. Also, a combination of a long futures contract and a short call, called a synthetic short put.

Time Decay:
Decline in the theoretical value of an option position based solely on the passage of time.

Time Spread:
The selling of a nearby option and buying of a more deferred option with the same strike price. Also known as a calendar or horizontal spread.

Time Value:
The amount by which an option's premium exceeds its intrinsic value. Usually relative to the time remaining before the option expires.

Underlying Futures Contract:
The futures contract that may be purchased (in the case of a call) or sold (in the case of a put upon the exercise of the option).

Vertical Spread:
Buying and selling puts or calls of the same expiration month but having different strike prices.

Volatility Quote:
An alternative means of quoting options, or combinations involving options, by bidding or offering the implied volatility. Any transactions quoted in volatility terms will be translated into price terms for clearing purposes by means of a standard options pricing model maintained and disseminated by the exchange.

Writer:
The issuer or seller of an option contract.
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