

## January Options Review

Record 4.3 Million Contracts Traded Daily, +37% YoY

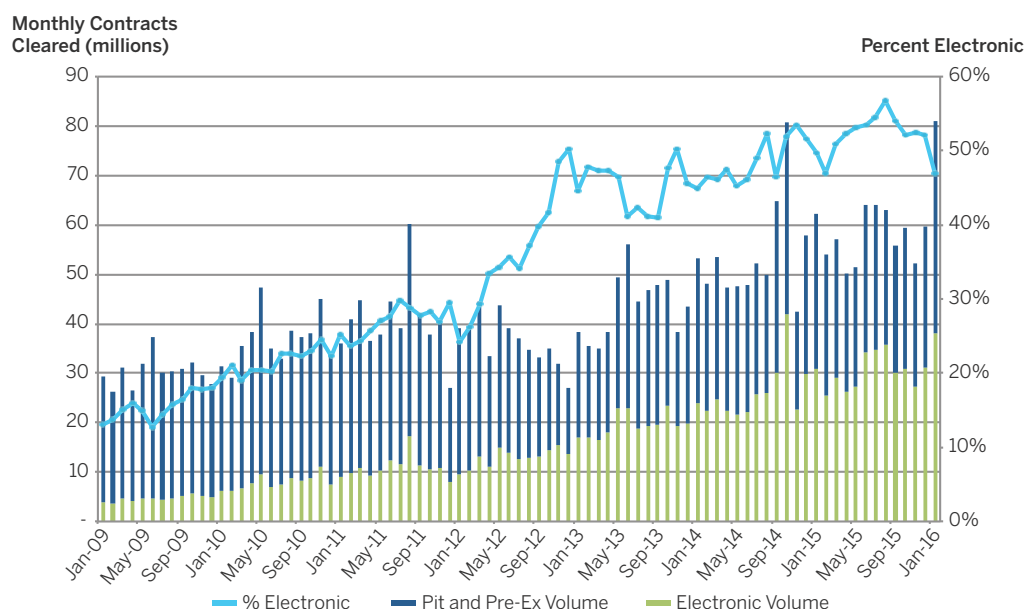
Options are tailor-made for uncertain markets, and January's record trading is a testament to the flexibility, precision, and customization that options bring to a portfolio.

- Record options ADV of 4,263,738, +37% YoY (Previous record = 3.5M in Oct 2014)
- Record electronic options ADV of 2,002,731, +30% YoY (Previous record = 1.96M in Jul 2015)

### JANUARY STATS

Asset Class	Electronic ADV (% Change YOY)	All Venue ADV (% Change YoY)	Month-End Open Interest
<b>Total Options</b>	2,002,731 (+30%)	4,263,738 (+37%)	56,723,828
<b>Interest Rates</b>	871,408 (+50%)	2,774,010 (+60%)	39,990,245
<b>Equity Index</b>	681,375 (+22%)	744,964 (+22%)	4,264,718
<b>Energy</b>	192,315 (+55%)	397,698 (+14%)	7,462,261
<b>Agriculture</b>	142,523 (-9%)	214,681 (-21%)	3,176,547
<b>FX</b>	84,900 (-12%)	89,422 (-11%)	690,055
<b>Metals</b>	30,211 (+4%)	42,963 (-7%)	1,140,002

### Options on Futures Monthly Volume By Venue



## INTEREST RATES OPTIONS

Over \$1 trillion notional traded daily in CME Interest Rate options; Do you know all of your options across the yield curve?

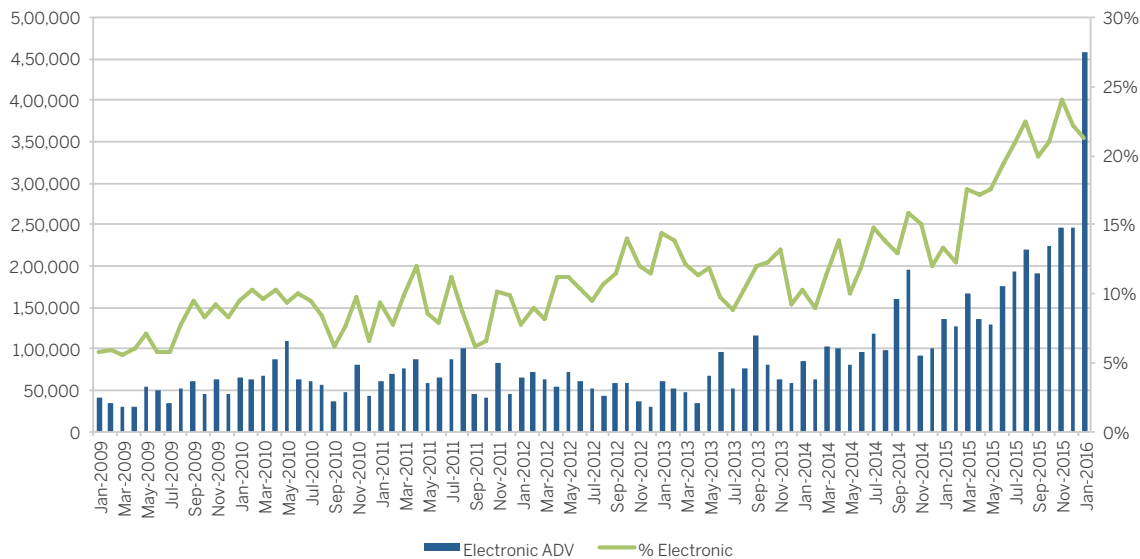
### January Highlights

- Record Interest Rate options ADV: 2,774,010, +60% YoY
- Record electronic Interest Rate options ADV: 871,408, +50% YoY
- Eurodollar options
  - Eurodollar options traded 2.2M contracts per day in January (Record 458K on Globex), including single-day record volume 4,279,584 contracts on January 19 – surpassing the previous record of 3,493,675 set on June 24, 2013.
  - During January, open interest also increased by more than 10.43M, with the biggest increases in the Jun15 Puts (+2.34M) and Dec15 Puts (+2.36M). As of January 31, open interest reached 36.5M, approaching the all-time high level of 37M from mid-2007.
- Ultra 10-Year Options Now Trading: 106 contracts traded since launched

### Most Active Interest Rate Options – January 2016

Option Product	Ticker (CME Globex)	Electronic ADV (% Change YoY)	All Venue ADV (% Change YoY)	% Puts
<b>Eurodollars (Quarterly, Serial, Mid-curves)</b>	GE, GEO-GE5	458,310 (+237%)	2,151,618 (+110%)	61%
<b>10-Year Note</b>	OZN	198,567 (-28%)	320,488 (-28%)	51%
<b>5-Year Note</b>	OZF	75,327 (+45%)	120,871 (+42%)	58%
<b>U.S Treasury Bond</b>	OZB	71,994 (+23%)	88,510 (+5%)	46%
<b>Weekly Treasury Options</b>	ZN1-5, FV1-5, ZB1-5	65,021 (+31%)	88,143 (+19%)	46%
<b>2-Year Note</b>	OZT	2,080 (-73%)	3,832 (-78%)	54%
<b>Ultra T-Bond</b>	OUB	102 (-78%)	206 (-77%)	67%
<b>30 Day Fed Funds</b>	OZQ	0	337 (-41%)	84%

### Eurodollar Options Electronic ADV



### New Treasury Analytics

- Try our new QuikStrike tool, which provides analytics for Treasury products, including a list of securities that make up the deliverable basket, implied yields and repo rates, as well as conversion between strikes prices and implied yields.

[cmegroup.com/treasuryanalytics](http://cmegroup.com/treasuryanalytics)

## EQUITY INDEX OPTIONS

With 744,964 contracts traded daily in January, +22% YoY, CME Group Equity Index options on futures offer around-the-clock liquidity, market depth, and extensive product choice on the world's benchmark indices to suit a variety of trading strategies.

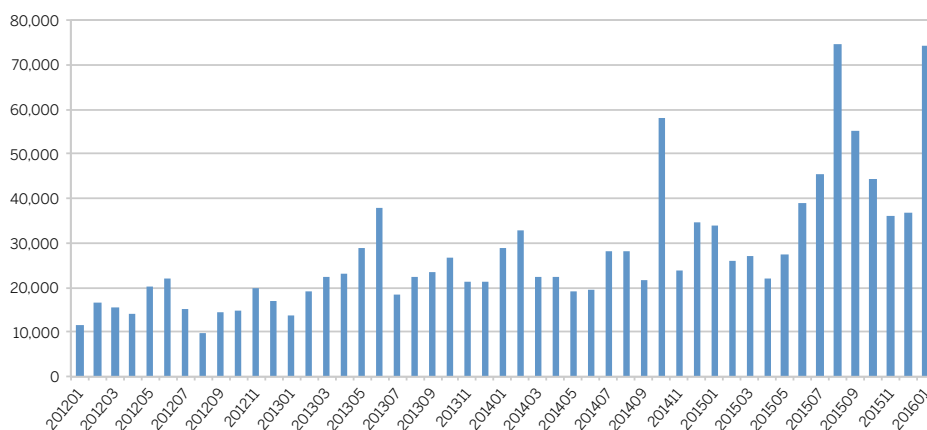
### Most Active Index Options – January 2016

Option Product	Ticker (CME Globex)	January ADV (% Change YoY)	% Electronic	% Puts
E-mini S&P 500	ES	436,383 (+26%)	100%	62%
E-mini S&P 500 Weeklies	EW1, EW2, EW4, EW5	147,260 (+5%)	100%	64%
E-mini S&P 500 End-of-Month	EW	79,720 (+24%)	100%	62%
S&P 500	SP	50,990 (+35%)	0%	67%
S&P 500 End-of-Month	EV	6,639 (+24%)	0%	69%
S&P 500 Weeklies	EV1, EV2, EV4, EV5	4,600 (-22%)	0%	78%
E-mini NASDAQ 100	NQ	14,624 (+117%)	100%	55%
E-mini NASDAQ 100 Weeklies	QN1, QN2, QN4	1,797 (+127%)	100%	43%
E-mini NASDAQ 100 End-of-Month	QNE	1,727 (+293%)	100%	64%
E-mini Dow (\$5)	YM	1,224 (+52%)	100%	54%

### Trading Surges during Non-U.S. Hours

- Capitalize on liquidity whenever news happens with nearly 74,342 lots traded daily outside of US trading hours, an increase of 120% vs. January 2015.

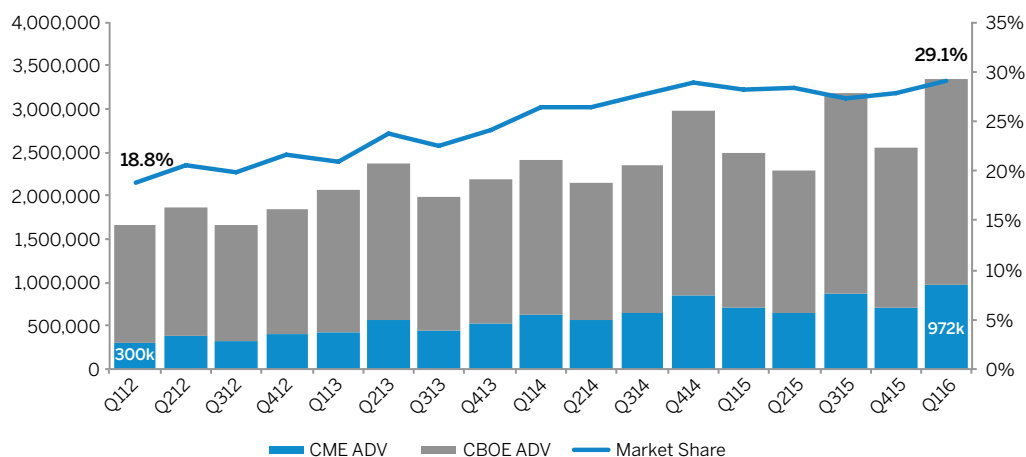
### Equity Index Options ADV During non-U.S. Trading Hours



### 29 percent market share cannot be ignored

- CME options on S&P 500 futures have a five-year compound annual growth rate of 34 percent and maintain 29 percent notionally-adjusted market share versus CBOE cash options QTD.

### S&P 500 Options Monthly Market Share



## ENERGY OPTIONS

The most extensive and liquid energy option marketplace, delivered with the freedom to choose the venue and trading software that best suits your needs.

### Most Active NYMEX Options – January 2016

Option Product	Symbol	Settlement	ADV	Open Interest*
WTI Crude Oil	LO	Physical	235,611	2,937,675
WTI 1 Month CSO	7A	Financial	11,999	321,055
WTI 1 Month CSO	WA	Physical	11,334	306,777
WTI Crude Oil European Options	LC	Financial	3,842	119,153
WTI-Brent Spread Option	BV	Financial	2,464	31,400
WTI Crude Weekly Options	LO1-LO5	Physical	1,056	1,586
Brent Crude Oil Futures-Style Margin Options	BZO	Financial	329	868
Natural Gas European Options	LN	Financial	101,441	2,761,850
Natural Gas Options	ON	Physical	16,224	147,280
Natural Gas Daily Options	KD	Financial	1,540	0
Natural Gas 1 Month CSO	G4	Financial	904	21,980
NY Harbor ULSD	OH	Physical	3,556	66,992
RBOB Gasoline	OB	Physical	2,119	35,187

\*Open Interest as of 12/31/15

### Record WTI Crude Oil options

- WTI options (LO) averaged a record 235,611 lots per day in January, +28% YoY
- A record 167,747 WTI options (LO) traded electronically per day in January, +53% YoY
- A record 58,000 crude oil spreads traded electronically per day in January.

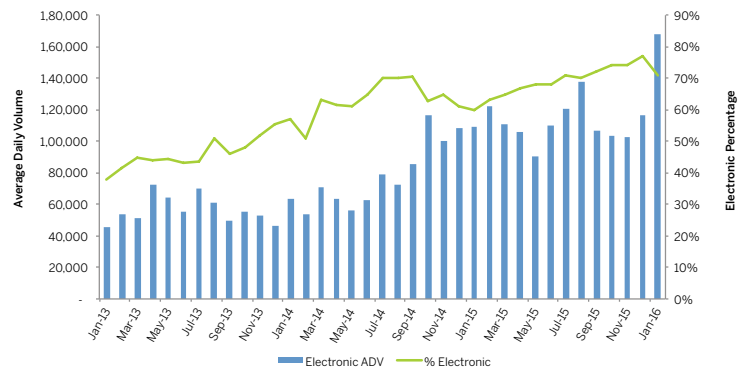
### New Brent Futures-Style Margin options (BZO) gaining traction

- 329 BZO contracts traded daily, including a record 1,400 contracts on 1/22.
- Open interest hit 2,168 contracts at its peak, closing the month at 868.

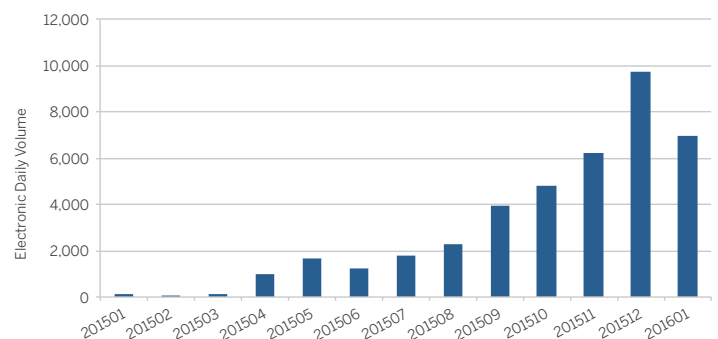
### Strong Electronic Volume in Benchmark Financial Natural Gas Options

- Over 19% of Natural Gas Options (LN + ON) traded electronically
- Financial Natural Gas option (LN): Electronic ADV up over 5000% to 6,976 contracts (Second best month ever)
  - RFQ Activity has Increased for Natural Gas European Options (LNE) with an Almost 100% Response Rate
- Electronic spread volume was 7,896 lots/day in January, +487% YoY

### NYMEX WTI Options (LO) Electronic Volume and Percentage



### Natural Gas Financial Option (LNE) Electronic Daily Volume



## AGRICULTURE OPTIONS

CME Group's diverse selection of Agricultural Options offers market participants the flexibility and deep liquidity they need for effective risk management, as well as the ability to execute volatility strategies or event-driven trades.

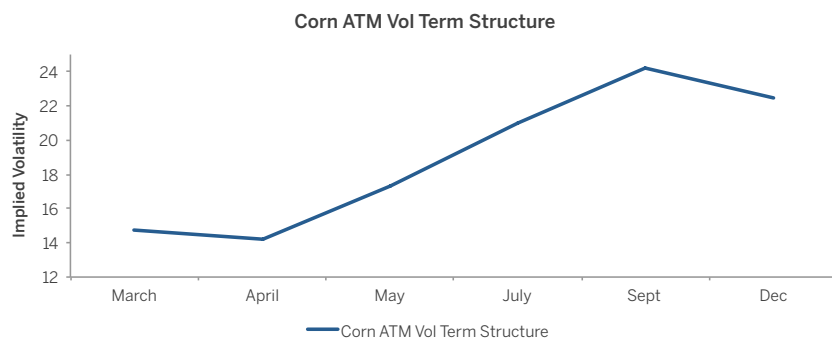
### January Overview

- Price and volatility continue to be suppressed leading to lower volumes
- Large volatility differences when looking at near term vs. long term maturities in grains
- December Corn option OI down 20% YoY even with lower premiums
- 214,681 Agricultural options traded per day, -21% YoY
- 67% of Grain and Oilseed options were executed electronically in January, 64% in Livestock, 47% in Dairy

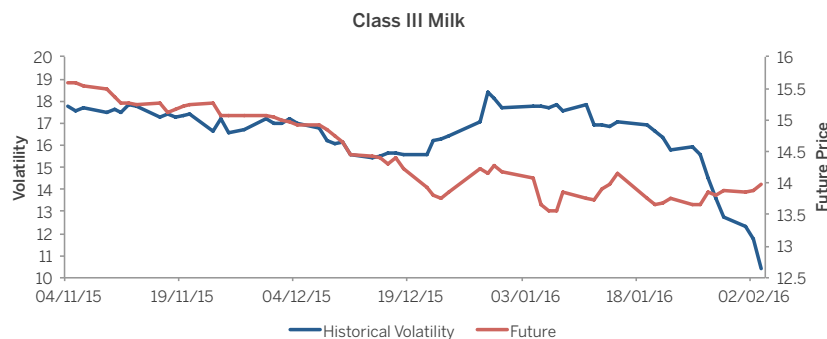
### Most Active Ag Options – January 2016

Option Product	January ADV	YoY % Change	% Elec	% Puts
Corn	66,009	-33%	67%	47%
Soybean	58,888	-22%	74%	52%
SRW Wheat	34,140	+9%	68%	36%
Live Cattle	20,515	+7%	59%	53%
Lean Hogs	8,735	-26%	74%	59%
Soybean Meal	7,969	-36%	59%	48%
Soybean Oil	7,942	-16%	50%	52%
Feeder Cattle	1,793	-23%	85%	59%
Class III Milk	1,119	-9%	56%	40%
KC HRW Wheat	982	-69%	38%	35%
Nonfat Dry Milk	388	+380%	28%	73%

### Corn volatility curve steep when looking at March vs. September



### Class III Milk vol taking a nose dive....



## FX OPTIONS

Access the largest regulated Forex marketplace in the world, with more than \$10 billion in daily FX Options liquidity. That's why our market was voted "Best FX Options Platform" at the Profit & Loss Readers' Choice Awards and why nearly all market participants choose to execute their Options electronically with CME Group.

### January Overview

- CAD/USD options trading surged 104% to 12,467, as volatility spiked in the highly correlated oil market.
  - CAD/USD options open interest increased 30% in January to 77,667 contracts at month-end
- JPY/USD options volume increased 56% to 17,454 contracts per day
- Open Interest increased 19% over the course of the month, with 690,055 contracts held at month-end.
- Weekly options volume increased 22%, outpacing standard options
- 95% of FX Options were executed electronically

### Most Active FX Options – January 2016

Option Product	Symbol	January ADV	YoY % Change	% Puts
EUR/USD	6E	39,141	-39%	49%
JPY/USD	6J	17,454	+56%	44%
CAD/USD	6C	12,467	+104%	41%
GBP/USD	6B	10,870	+1%	45%
AUD/USD	6A	8,336	+33%	60%
CHF/USD	6S	499	-74%	53%
MXN/USD	6M	141	+176%	26%

### Weekly FX American-Style Options

- 18,346 weekly options traded daily in January, +22% YoY
  - EUR weekly: 7,985 ADV, -16% YoY
  - CAD weekly: 3,866 ADV, +212% YoY
  - JPY weekly: 3,366 ADV, +82% YoY
  - GBP weekly: 1,772 ADV, +54% YoY
  - AUD weekly: 1,306 ADV, +26% YoY
  - CHF weekly: 51 ADV, -78% YoY
- FX Weekly Options can be used to hedge risk around specific market events, such as Fed updates, employment reports, and other economic events.

### Block threshold reduction

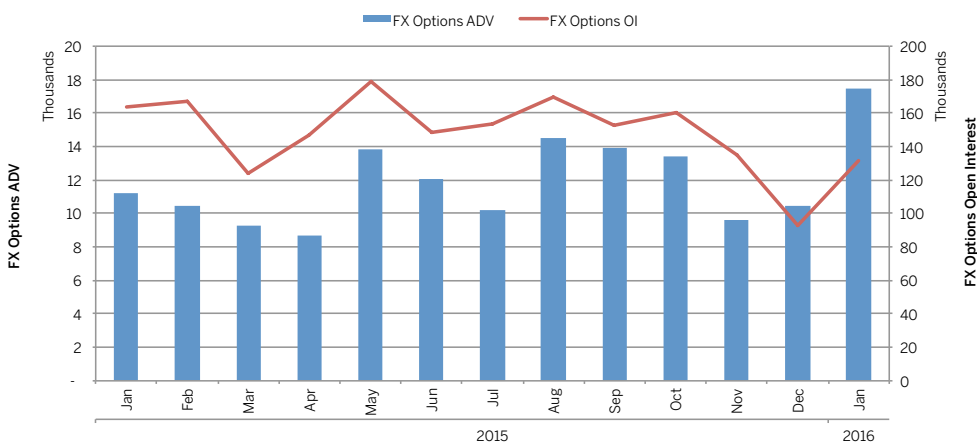
Reduced block thresholds allow for more flexibility:

- From 50 lots to 10 lots in 30 FX futures
- From 50 lots to 20 lots in 10 companion FX Options
- From an award-winning Clearing House and FX Options platform.
- Now, submit your blocks directly into ClearPort with your smartclick log in.

### Are you a Broker?

- We have a number of initiatives to grow your business. Contact us today at [fxteam@cmegroup.com](mailto:fxteam@cmegroup.com).

### Japanese Yen Options - ADV and Open Interest



## METALS OPTIONS

Get nearly 24-hour access to solid opportunities with the suite of COMEX and NYMEX metals options at CME Group, the world's most liquid metals marketplace. Increase your flexibility and trade your choice of Short-Term Gold or monthly Gold, Silver, Platinum, Palladium, Iron Ore, and Copper options on CME Globex and CME ClearPort.

### January Overview

- Metals options: 42,963 ADV, -7% YoY, +60% MoM
- Gold options averaged 37,999 contracts per day in January, +4% YoY, +63% MoM
- 70% of Metals options traded electronically on CME Globex
- Total open interest in Metal options was 1,140,002 at month-end

### Most Active Metals Options

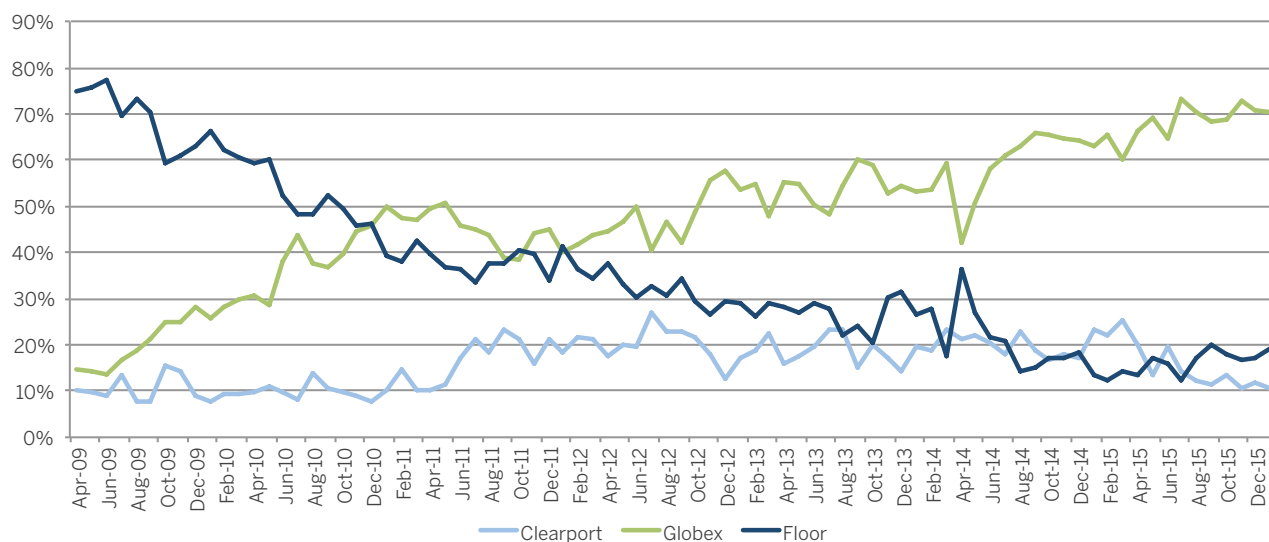
Option Product	Ticker (CME Globex)	ADV (% Change YOY)	% Electronic	% Puts	Open Interest*
Gold	OG	37,999 (+4%)	70%	33%	991,674
Silver	SO	3,847 (-54%)	90%	40%	100,572
Iron Ore	ICT	439 (+189%)	0%	54%	36,681
Platinum	PO	318 (+3%)	6%	57%	3,980
Copper	HX	88 (-11%)	76%	48%	2,593
Gold Weeklies	OG1-OG5	163 (-6%)	81%	69%	841
Palladium	PAO	108 (-65%)	7%	16%	4,502

\*Open Interest as of 01/29/16

### Copper Options

- As of May 1, 2015 CME Group now has a fee waive in place on Copper options for COMEX members as well as a fee reduction for non-members. With these new fees, we are now the most cost-effective clearing venue for your Copper options trading needs. These contracts are listed for trading on CME Globex and the NYMEX trading floor and for submission for clearing through CME ClearPort.

### Metals Options Volume by Venue



### Metals Options Resources

#### Daily Metals Market Report

Subscribe to receive daily reports recapping the previous day's Metals market activity including, volume, open interest, put/call ratios, and most active contract months/strikes.

[cmegroup.com/dailymetals](http://cmegroup.com/dailymetals)

#### Liquidity Alerts

Receive real-time notifications when trades are executed and the market is moving in both Base Metal and Precious Metals Options.

[cmegroup.com/mtliquidityalerts](http://cmegroup.com/mtliquidityalerts)

## THREE WAYS TO ACCESS

### On CME Globex

The recent growth of electronic options markets has led to deeper, more diverse markets with easier entry and exit points, and more streamlined access for execution and clearing.

- Record 2,002,731 in daily volume
- Speed, transparency, access and liquidity of electronically traded markets
- Two-sided markets supported by dedicated market makers
- Request for Quote (RFQ) – Allows participants to get competitive quotes, even during times of low market activity.

### On the Floor

- 1,884,081 in daily volume
- Quick setup and nearly instant access to liquidity
- Voice brokers and floor traders facilitate price discovery and efficient execution on your behalf

### Bilaterally

- 376,925 in daily volume
- Control and convenience of privately negotiated trades
- Security and counterparty credit risk mitigation of CME Clearing

## OPTIONS TOOLS AND RESOURCES

### Options Product Page

Analytic tools, product information, education, research, tools and resources

[cmegroup.com/options](http://cmegroup.com/options)

### QuikStrike Option Pricing & Analysis

Access current and historical volatility (by strike), volume and OI information, delta sheets, options pricing analysis, spread analysis & risk graphs.

[cmegroup.com/quikstrike](http://cmegroup.com/quikstrike)

### Request For Quote (RFQ) Functionality

Learn how to replicate the flexibility and price discovery of brokered markets on screen, to instantly get electronic quotes on multi-leg options strategies, or to generate interest on a specific strike when liquidity is low.

[cmegroup.com/rfq](http://cmegroup.com/rfq)

### CME Direct

CME Direct is a highly-configurable trading front end that offers the best solution for Options traders across all CME markets.

[cmegroup.com/direct](http://cmegroup.com/direct)

### Electronic Options Spotlight

A quarterly snapshot of electronic trends and opportunities.

[cmegroup.com/electronicoptions](http://cmegroup.com/electronicoptions)

### Options on Futures Guide

Introductory guide to options and listing of most actively traded options contracts.

[cmegroup.com/optionsguide](http://cmegroup.com/optionsguide)

### Report Legend

**YoY** – Unless otherwise specified, YoY compares January 2016 to January 2015

**MoM** – Compares January 2016 to December 2015

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Futures and options trading is not suitable for all investors, and involves the risk of loss. Futures are a leveraged investment, and because only a percentage of a contract's value is required to trade, it is possible to lose more than the amount of money deposited for a futures position. Therefore, traders should only use funds that they can afford to lose without affecting their lifestyles. And only a portion of those funds should be devoted to any one trade because they cannot expect to profit on every trade. All references to options refer to options on futures.

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