

Real World Application of Risk Management Tools

World Chemical Forum

September 12, 2023

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What is CME Group?

CME Group - Who are we?



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Futures Exchanges

Board of Trade of the City of Chicago (CBOT)
Chicago Mercantile Exchange (CME)
New York Mercantile Exchange (NYMEX)
Commodity Exchange Inc. (COMEX)

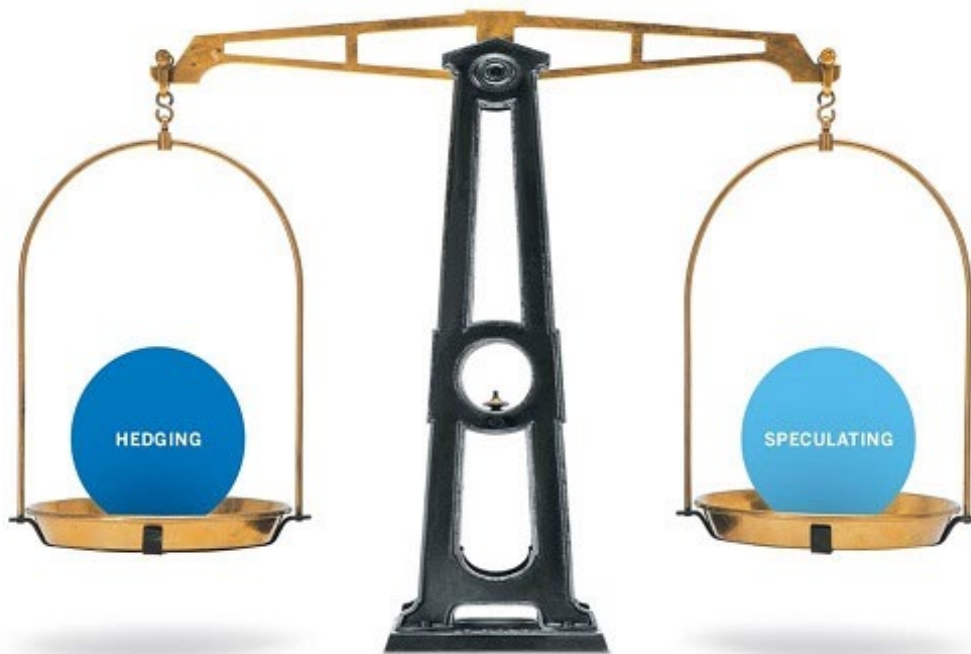
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Clearing House

CME Clearing

RISK

We bring those who want to manage risk together with those who want to profit from accepting that risk.





CME Group offers the widest range of benchmark futures and options products, covering all major asset classes – and all kinds of risk.

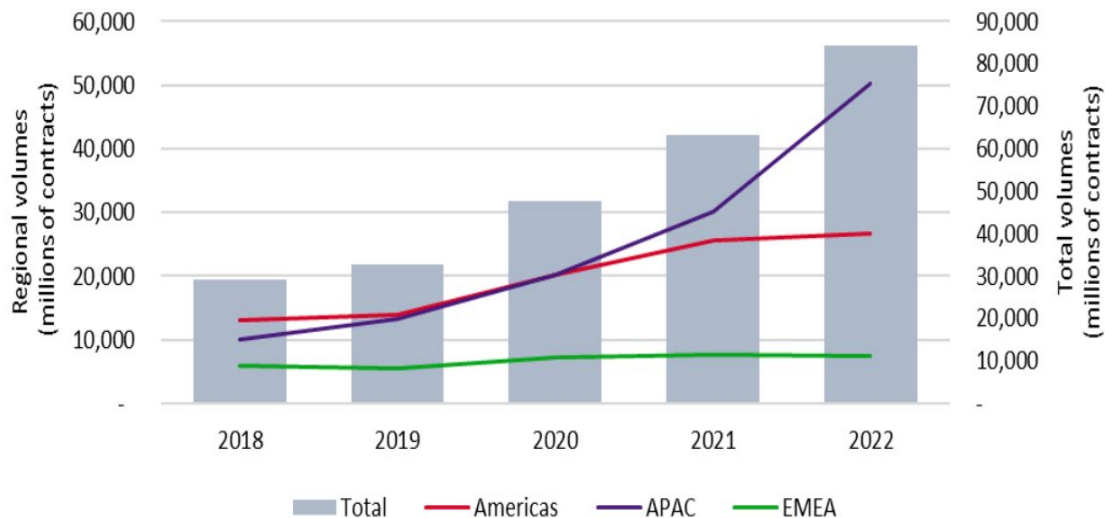


Exchange Traded Derivatives (ETDs) is a global industry.

Trading of listed futures and options takes place on multiple exchanges across six continents.



Global Landscape of Exchange Traded Derivatives



WFE Report Survey 2022

The World Federation of Exchanges conducts an annual survey of the derivatives markets.

The 2022 report is based on data collected from 50 derivatives exchanges.

2022 volumes increased 34.4% over 2021. Increases in volumes across all regions: the Americas +5.6%, APAC +67.4%, and EMEA + 0.1%.

Source: WFE Survey 2022, published April 2023

The main purpose of CME Group's futures exchange business is:

Price Discovery

Risk Transfer

Standardized futures at CME Group

What a futures contract is **AND** what it is not.

Futures contracts convey no rights of present ownership, nor do they pay or accrue interest.

They are **futures contracts** which, as a contract, provide certain rights and obligations.

The terms of the contract are outlined in its contract specifications, available for viewing on cmegroup.com.

Standardized futures at CME Group

Futures contracts do not require full payment of the notional value of the contract at execution.

What futures do require is a performance bond, also referred to as margin.

This is different than securities margin which involves borrowing capital from a broker to buy shares of stock. That is a loan from the broker (up to 50% of the value of the stock purchase) and results in interest expense.

Margins on futures constitute a security bond on the open position to ensure performance of the contract. Usually, a fraction of the notional value of the contract.

CME Group NGL and Petrochemical Product Suite

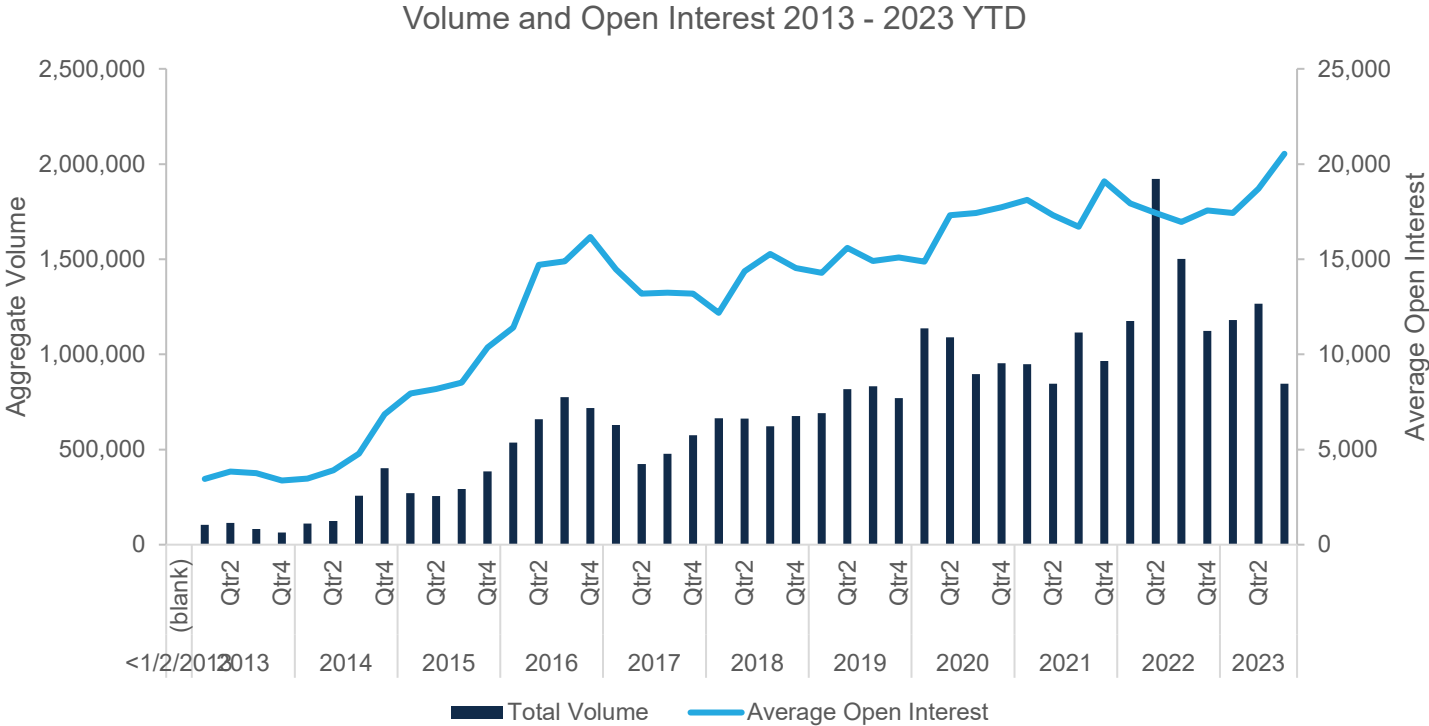
NGL Futures Contracts

Key Contract Specifications

Contract Unit	42,000 gallons
Price Quotation	U.S. dollars and cents per gallon
Tick Size	0.00001 per gallon / \$0.42 per tick
Settlement	Financial
Contract Listing	Current year and next 4 calendar years
Full Specs	Link

- Financially settled ethane, natural gasoline, normal butane, isobutane, and propane futures and option contracts.
- Based on monthly average of OPIS NGL assessments at Mont Belvieu.
- Expires on the last business day of the contract month .
- Open interest through December 2027.
- Provides transparent form of price discovery in the NGLs market.
- Offers unparalleled market access and 23 hour/day liquidity

CME Group NGL Growth Over the Last 10 Years



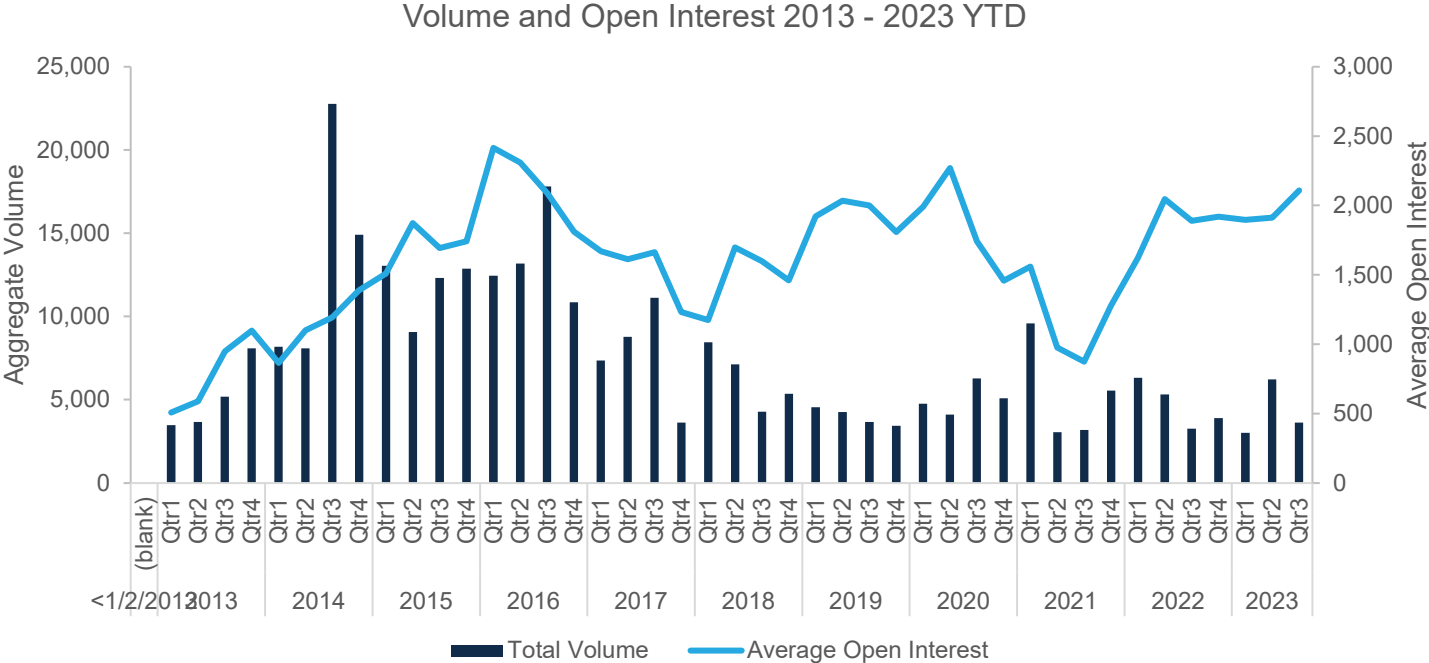
Data source: CME Group

Ethylene and Propylene Futures Contracts

- Physically-Delivered Ethylene In-Well at Mont Belvieu.
- Expires on Second-to-Last Business Day of the Current Month.
- Financially-Settled Ethylene and propylene.
- Based on OPIS PCW assessments for ethylene and propylene at the Enterprise Mont Belvieu Hub.
- Monthly average of OPIS PCW ethylene price at Mont Belvieu.
- Provides transparent form of price discovery for ethylene and propylene markets.
- Open interest through December 2024 for both ethylene and propylene futures contracts.

	Mont Belvieu Ethylene (OPIS PCW) Futures	PGP Polymer Grade Propylene (PCW) Financial Futures
Contract Unit	100,000 pounds	100,000 pounds
Price Quotation	U.S. dollars and cents per pound	U.S. dollars and cents per pound
Tick Size	0.00001 per pound / \$1.00 per tick	0.00001 per pound / \$1.00 per tick
Settlement	Financial	Financial
Contract Listing	Current year and next 2 calendar years	Current year and next 2 calendar years
Additional Contract Specifications	Link	Link

Petrochemical Futures Volume and Open Interest



Data source: CME Group

CME Clearing

CME Clearing processes and monitors all trades and ensures the financial integrity of every trading party and transaction in their respective markets.



Margin

There are two types of margin at CME Group.

Initial margin: the amount required by CME Clearing to initiate a futures position. While set by CME Clearing, a broker may require additional funds over and above CME Clearing initial margin be held on deposit.

Maintenance margin: the minimum amount that must be maintained at any given time in your account per open futures position.

Futures positions are consistently monitored by the Clearing House and marked-to-market twice daily. The variation cash flows based on the M-T-M reduce systemic risk and eliminate loss carry forwards.

Important risk management practices

Daily mark-to-market calculations

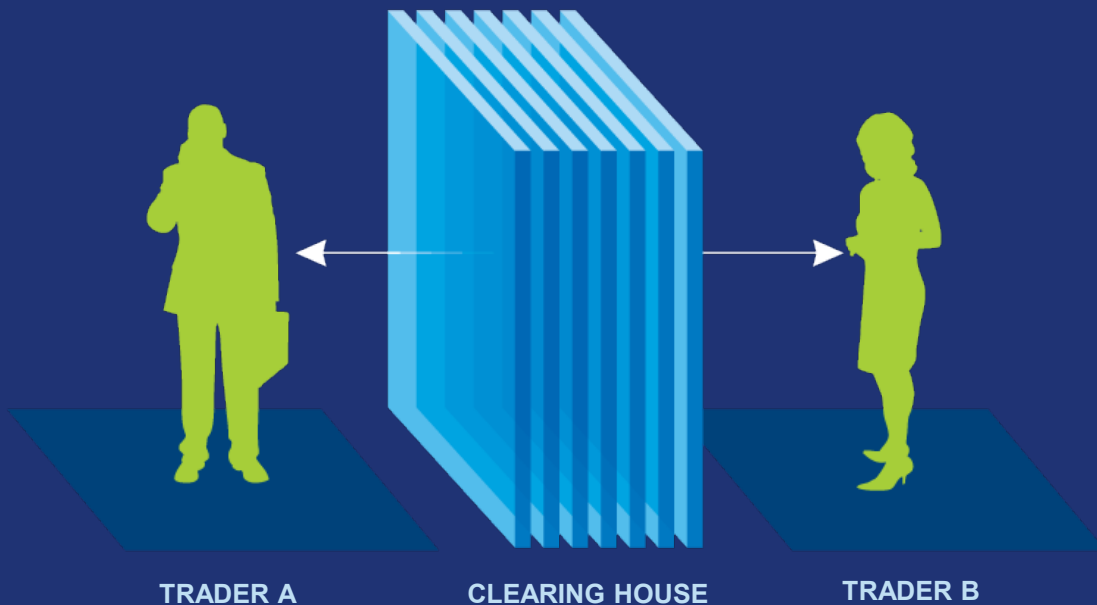
Real-time monitoring of position and exposure

Minimum margin requirements

Monitoring of risk concerns

Member and customer account stress testing

Credit controls for use by clearing members



Access to CME Clearing

CME Clearing provides fair and open access to its clearing services by establishing appropriate admission and continuing participation requirements that are objective, public, and risk-based

- Market participants can either access CME Clearing directly by becoming a Clearing Member or by being intermediated by a Clearing Member (i.e., customer)
- Clearing Members of CME Clearing must meet the requirements defined under the CME Group Exchange Rulebooks for clearing membership, which include operational, financial, reporting, and risk management requirements.
- A Clearing Member that provides clearing for customers is subject to additional requirements and must be registered with the CFTC as a futures commission merchant (“FCM”).
- CME Clearing conducts an initial onsite review of each applicant Clearing Member during which the prospective Clearing Member must demonstrate a sufficient risk management framework and the ability to risk manage positions for all products for which it is applying to clear.

Regulation: The U.S. futures industry has a long history of federal oversight



Current futures industry regulatory framework grew out of federal government's attempts to curb perceived commodity price speculative abuses in the 1920s.

Passed in 1936, the Commodity Exchange Act (CEA) regulates the trading of commodity futures in the United States.

Sources: [CFTC.gov](https://www.cftc.gov), [Encyclopedia.com](https://www.encyclopedia.com)



In 1974 Congress passed the Commodity Futures Trading Commission Act, creating the CFTC in 1975.

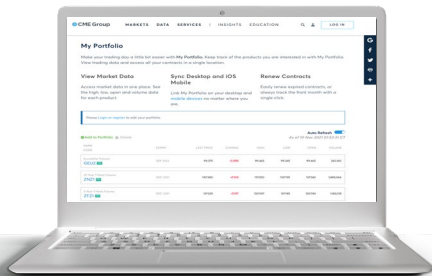
It is an independent agency established to regulate commodity futures and options markets in the United States.

Thank you.

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CME Institute

CME Institute is your place to learn more about futures and options markets.

We have a variety of free online classes, resources, trading simulators, and other tools to help you sharpen your skills and deepen your knowledge of our markets.

