

# Risk Management With Futures

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Private and confidential

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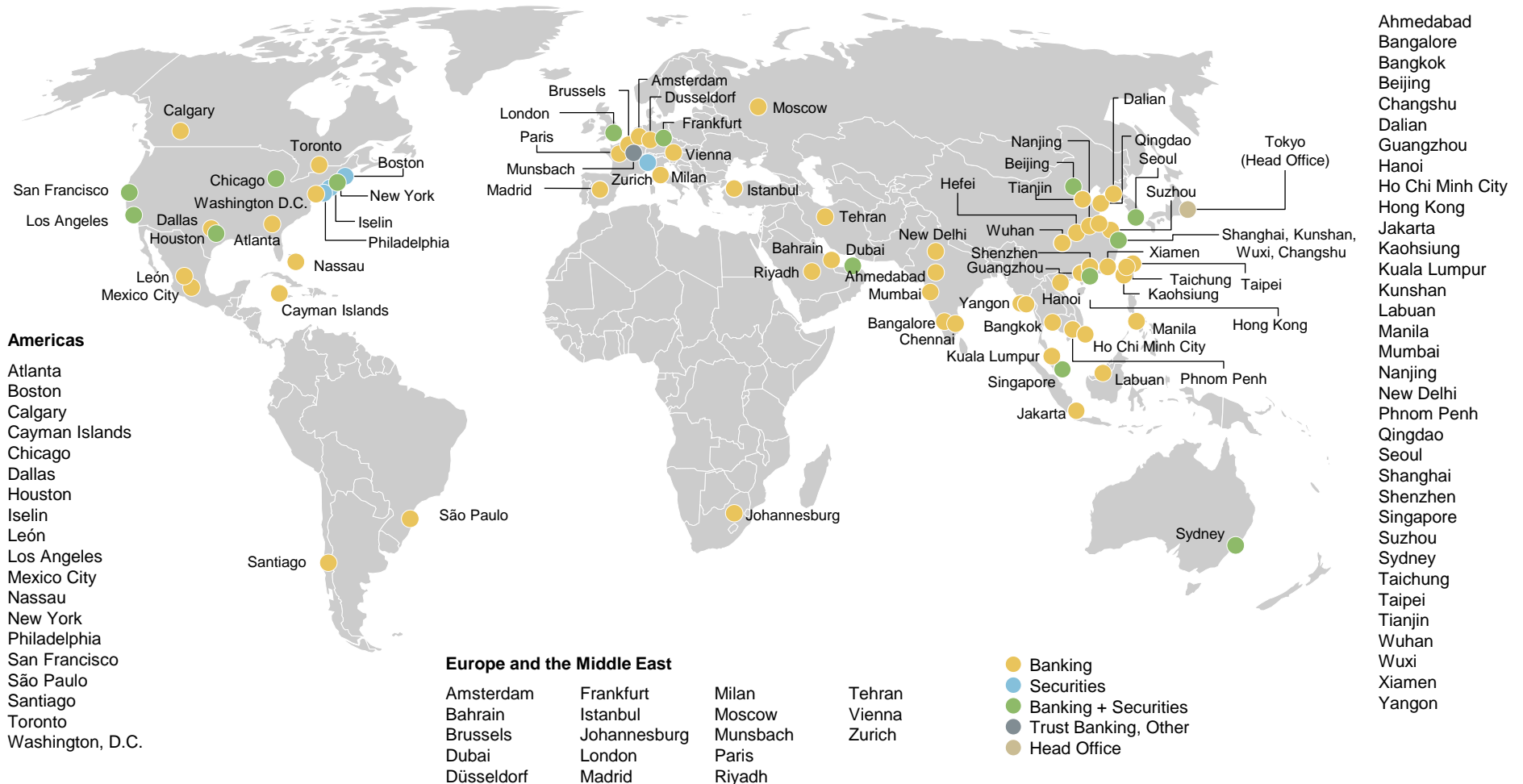
# Topics

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- Mizuho Securities: Who we are and what we do
- Basics of Futures Trading
  - What is a Future?
  - What types of Futures?
  - What are the uses of Futures
  - Trading Strategies
- Futures Ecosystem – Centralised Risk Management
- Common Terminologies in Futures
- Risk Management & Hedging: Using EUA Futures as example
- Benefits of Using Futures as Risk Management Tool
- Q&A

# Mizuho Financial Group

Mizuho is one of the largest financial institutions in the world offering a broad range of financial services with approximately 75,000 employees worldwide in 120 offices in approximately 40 countries with over 140 years of banking experience.



# Mizuho's Futures Division is part of a strong global franchise

## Mizuho Markets Futures S'pore Pte. Ltd.

### (MMFS)

Brokerage and clearing services for exchange listed derivatives.

## Mizuho Securities USA LLC (MSUSA)

Wholly-owned subsidiary of U.S. bank holding company, Mizuho Americas LLC, which is wholly-owned by Mizuho Bank Tokyo, which is owned by Mizuho Financial Group, Inc.

Total team of 565 staff with offices in New York, Chicago, San Francisco, Los Angeles, Atlanta, Boston, Houston, and Hoboken.

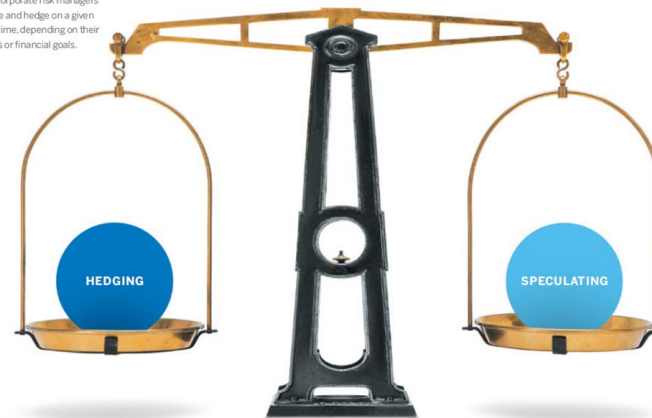
- Strong Balance Sheet
  - Stability of MHFG's assets of approximately \$220 trillion yen (US\$ 1.47 trillion).
- Financing Solutions
  - Ability to work with Mizuho Bank to develop innovative financing solutions that help maximize client growth.
- 24-Hour Voice Execution and Trade Support Desk
  - Provides clients with an execution desk staffed with experienced traders
- Customized Solutions
  - Dedicated client services team to help develop and implement client-specific middle and back office solutions.
  - Support **physical delivery** if required by clients
- Diverse Client Base
  - Provide execution and clearing services to a wide range of institutional and commercial clients with a focus on futures markets.

# Basics of Futures Trading

- What is a Future?
  - Futures are derivative financial contracts that obligate parties to buy or sell an asset at a predetermined future date and price. [Quote Investopedia]
- What types of Futures?
  - Financial Futures, e.g. Index Futures (S&P 500), Interest Rate Futures (U.S 10 years treasury), FX Futures (USD/CNH futures)
  - Commodity Futures, e.g. Crude Oil (WTI, Brent), Carbon Emissions, Agricultural/Soft (Soybean, Palm Oil), Metals (Gold, Aluminum)
  - Cleared OTC Swaps, e.g. LNG, Electricity, Freight Futures
  - Cryptocurrency Futures e.g. BTC, ETH Futures
- What are the uses of Futures?
  - Hedging
    - ◆ Corporate hedgers
    - ◆ Hedge Funds, Asset Managers
  - Speculation
    - ◆ HFTs
    - ◆ Quant Funds
    - ◆ Retail investors
- Trading Strategies
  - Delta neutral (Hedge)
  - Arbitrage
  - Directional

## The two sides of trading.

Individual traders, trading firms, investors and corporate risk managers could speculate and hedge on a given market at any time, depending on their business needs or financial goals.



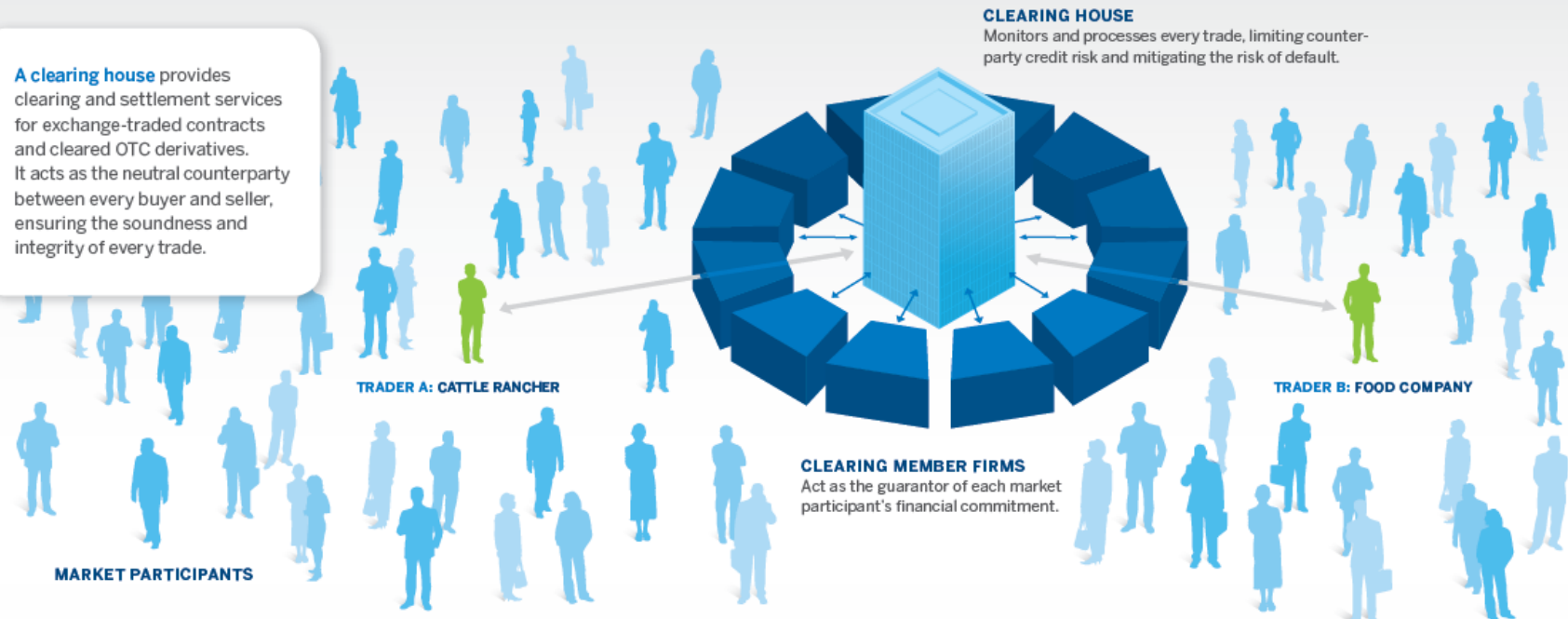
**HEDGING LETS TRADERS TRANSFER RISK**  
Hedging manages risk by locking in a future price for a product – protecting traders from swings in the prices of products. By smoothing out the ups and downs in the price of something, a business can make its costs – and the profit it can make – more predictable.

**SPECULATING LETS TRADERS TAKE ON RISK**  
Speculating absorbs risk in pursuit of profit. When traders speculate, they're investing – buying and selling contracts in order to make a profit when prices move. Before they accept this kind of risk, though, they do some very technical math to decide when it makes sense for them to accept the risk.

# Futures Ecosystem – Centralized Risk Management

## A COUNTERPARTY FOR EVERY TRADE

A clearing house provides clearing and settlement services for exchange-traded contracts and cleared OTC derivatives. It acts as the neutral counterparty between every buyer and seller, ensuring the soundness and integrity of every trade.



Source: FuturesFundamentals.org

### Market Participants

- Commercial Traders
- Prop Trading Groups (PTGs)
- Asset Managers/Hedge Funds
- Retail

### Clearing Members

- Bank backed brokers e.g. Mizuho Markets Futures Singapore (MMFS)
- Non-bank brokers

### Exchange/Clearing House

- European Energy Exchange (EEX)
- Intercontinental Exchange (ICE)

# Common Terminologies in Futures Trading

<b>Term</b>	<b>Definition</b>
Lots	Number of contracts
Volume	Total number of lots traded or physical (notional) quantity traded
Open Interest (OI)	Total number of outstanding contracts at an Exchange that is not settled
Initial Margin	Cash (or equivalent) that is required to be set aside when initiating a new position
Initial Margin Limit (IML)	Maximum overnight margin exposure for trading positions
Margin Call	Margin call occurs when Total Equity falls below Initial Margin required in the trading account. Client will be required to top up cash or reduce trade positions to fulfill margin call notices
Physical delivery	Underlying asset of the futures contract that must be physically delivered (sell position) or purchased (buy position) during expiry of the futures contract



# Risk Management & Hedging: Using EUA Futures as example

Assuming Ship Company A needs to purchase 10,000 EUAs (10,000 tonnes of CO2)

- In contracts size, it will be 10 lots (10,000/1,000)

On 2<sup>nd</sup> October, Shipping Company A enters into EUA futures transaction to buy ICE EUA Dec '23 Future @ EUR 80

- Initial margin required: 10 lots \* EUR 9,400 = EUR 94,000
- Notional (full value) size of trade: 10 lots \* 1,000 EUAs \* EUR 80 = EUR 800,000

	2 Oct	3 Oct	4 Oct
IM Requirement	94,000	94,000	94,000
Purchase Price	80	80	80
Daily Closing Price*	80.80	79.65	81.67
Unrealised P/L (EUR)	8,000	(3,500)	16,700

Assuming portfolio remains constant, exclude fees & commissions

\*Source: [EUA Futures | ICE](#)

# Benefits of using Futures as Risk Management Tool

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- Centralized risk management
  - Risk is centralized through the Central Clearing Counterparty (CCP) system
  - Reduce concern of counterparty risks, due-diligence concerns through bilateral transactions
  - Centralised clearing has multi layers of default risk management to reduce and prevent systemic failure
- Price transparency
  - Exchanges publish settlement prices on daily basis
  - Greater price transparency for effective risk management
- Protect profits and reduce losses from wild swings in underlying prices of EUA
- Lower capital outlay & costs vs. paying for full notional value upfront

# Mizuho Futures Team

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# Questions and Answers

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