

Containerized Freight Index (Europe service) Futures

Trading Handbook

2025



上海期货交易所
SHANGHAI FUTURES EXCHANGE

上海国际能源交易中心
SHANGHAI INTERNATIONAL ENERGY EXCHANGE

Trading Handbook on Containerized Freight Index (Europe service) Futures 2025 Edition

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INTERNATIONAL CONTAINER MARITIME TRANSPORT MARKET

Development of the international container maritime transport market

International container maritime transport refers to a mode of transport whereby the carrier regularly delivers, through containers, the cargoes consigned by the shipper from one country to another between fixed ports of call, along fixed routes, and in accordance with the pre-established sailing schedules and rules. Container ships carry virtually all types of break-bulk cargo other than dry bulk goods, petroleum products, and special goods, and serve various economic sectors and industries, thus having a far-reaching impact on the national economy.

In April 1956, Malcolm McLean, an American truck businessman, converted a T-2 Ideal-X tanker dubbed Maxton to transport 58 large containers on the deck from Newark to Houston. The three-month trial generated tremendous economic benefits, demonstrating the superiority of container shipping. In October 1957, McLean's Sea-Land company converted six C-2 break-bulk cargo ships into cellular container ships. The first of this kind vessel was the 90,000 DWT Gateway City, which equipped with its own set of gantry cranes and carrying 226 35-foot containers, sailed on its maiden voyage from Newark for Houston, marking the start of container shipping.

The period between 1966 and 1983 was critical for container adoption across the world. International container shipping, especially maritime transport, grew rapidly in these years as its advantages were increasingly recognized due to rising global trade, a substantially larger share of container cargoes, and better port facilities. The container shipping industry matured and finally became a key pillar for global trade after 1984, amid changing global industry distribution, booming global trade, and improving legal frameworks.

In China, container shipping started off between 1973 and 1978, expanded after 1990, and experienced exponential growth after 2001, when the country was admitted to WTO. An essential part of China's container shipping market, Shanghai recorded a container throughput of more than 51.506 million TEU in 2024, topping the world list for 15 consecutive years

Steps in export container maritime transport

(1)Booking

The shipper is required to complete a *Container Booking Note* some time before the shipment in accordance with the terms of the sales contract or letter of credit to book capacity through a freight forwarder or with a liner directly.

In general, a liner opens its booking portal about one month before sailing, allowing shippers with long-term agreements to book capacity and confirm freight rate directly or through a freight forwarder; shippers without long-term agreements can also book capacity but cannot confirm the freight rate until several days before the sailing.

(2)Acceptance of shipping order

The liner or its agent decides whether to fulfill the shipping order based on its capacity, route, and other factors and the shipper's needs. If the order is accepted, the liner will prepare a booking list and send it to a Container Yard (CY) or Container Freight Station (CFS). The CY or CFS will accordingly arrange empty containers and perform transfer procedure. The liner will also send an equipment interchange receipt (EIR) to the shipper or its agent to close the booking process.

(3)Dispatch/picking-up of empty containers

In Full-Container Load (FCL) shipping, empty containers are usually picked up by the shipper or its agent at the CY with an EIR, although some shippers also use their own containers. In Less-Than-Container Load (LCL) shipping, empty containers are picked up by the CFS with an EIR. The shipment needs become reasonably certain once the shipper picks up the empty containers.



(4) Stuffing

Under FCL, the shipper is responsible for loading goods into containers at its warehouse or factory. Under LCL, the shipper or its agent will deliver the goods that will not take up the entire space of a container to the CFS for consolidation.

After consolidation, the consolidator will complete a Container Load Plan, which specifies the name, quantity, and stuffing of the goods in the container and serves as the only document recording the particulars of the goods.

(5) Haulage of loaded container to port

The shipper, its agent, or the CFS delivers the loaded containers to the CY before its closing. The CY will verify the Dock Receipt and Container Load Plan against the booking list and inspect the goods. Upon acceptance of the goods, the CY will sign the Dock Receipt and return the signed original to the shipper or its agent. Under LCL, the CFS will sign the Dock Receipt when the shipper or its agent delivers the goods to the CFS and return the signed original.

(6) Customs declaration and inspection

Before loading and shipment, the shipper or its agent needs to present the Dock Receipt, export license, and commodity inspection certificate to the customs and the inspection and quarantine authority. The dock receipt will be stamped with the clearance seal once the shipment is cleared.

(7) Loading

The container terminal prepares a stowage plan according to the cargo to be loaded and then moves the containers to the marshaling yard for loading once the ship is berthed. If the cargo exceeds the capacity of the ship on duty, the liner will shut out excess goods based on shippers' needs, which will be loaded onto subsequent ships.

(8) Departure

The ship is loaded with the cargo and will leave the port by the liner's sailing schedule to the destination port.

(9)Exchanging for a B/L

The liner will make a B/L for the loaded cargo after the container ship leaves the port for two to three days. A B/L can be a shipped-on-board one or a received-for-shipment one. The former is issued after the cargo is loaded; the latter is issued before the cargo is loaded, and therefore can only prove the transfer of cargo from the shipper to the carrier, but not the loading date. After being stamped with the word "loaded" and the loading date, a received-for-shipment B/L will become a shipped-on-board B/L.

Main liners providing Shanghai-Europe service

At present, there are 10 liners operating the Shanghai-Europe route, namely COSCO Shipping Lines, CMA CGM (France), Evergreen Marine (Taiwan, China), Hapag-Lloyd (Germany), Maersk (Denmark), Mediterranean Shipping Company (Switzerland), Ocean Network Express (Japan), Orient Overseas Container Line (Hong Kong, China), Yang Ming Marine (Taiwan, China), and HMM (Korea).

Major ports in the international container maritime transport market

The world's top ten container ports in 2024 were Shanghai, Singapore, Ningbo Zhoushan, Shenzhen, Qingdao, Guangzhou, Busan, Tianjin, Jebel Ali, and Port Klang, with Chinese ports taking six of the top ten spots by throughput. The six ports had a combined throughput of 205 million TEU, accounting for 68.15% of that of the top ten. Notably, the Shanghai Port, with a throughput of 51.506 million TEU, has been the largest container port in the world for 15 years in a row.



COMPOSITION AND INFLUENCING FACTORS OF THE FREIGHT RATE FOR INTERNATIONAL CONTAINER MARITIME TRANSPORT

Freight rate is the price charged by a container liner for providing products and services and carrying each unit of cargo.

Composition of the regular freight rate for international container maritime transport

The regular freight rate has two major components—basic ocean freight and surcharges—and is commonly quoted and settled in U.S. dollars. Basic ocean freight is charged by liners for each pricing unit (such as 1 FEU or TEU) of cargo shipped under the CY/CY term. Surcharges are the additional fees charged by liners according to the specific terms of carriage, fuel prices, peak or off-peak seasons, industry practices, etc. Examples include bunker fuel surcharge, currency surcharge, peak season surcharge, war risk surcharge, congestion surcharge, canal surcharge, International Security Port Surcharge, and inland transshipment charges. In addition to the regular freight, international container shippers also need to bear a list of expenses quoted in their local currencies, such as terminal handling charges, documentation charges, telex release charges, customs declaration charges, container loading charges, and trucking charges.

Major factors influencing the freight rate for international container maritime transport

(1) Supply and demand. The supply and demand of the international container shipping market is the determinant of the freight rate. The freight rate falls when the supply rises, and vice versa; it rises when the demand rises, and vice versa.

(2)Operating cost. The level of costs has a remarkable impact on the freight rate. The main components of container shipping costs are fixed investment in vessels and containers, voyage operation cost, administrative expenses, and financial expenses.

(3)Global economy. The demand for international container shipping arises from global trade. Growth in global container capacity and growth in global trade are closely related. The international container freight rate is also strongly linked to the global economic environment.

(4)Exchange rate. Exchange rate fluctuations can have an impact on the cost control and profit calculation of liner companies, thus affecting their freight rate.

(5)Geopolitics. Political factors are mainly past or future policies or major events that had or will have an impact on the global trade. Political factors will often trigger a short-term swing in the freight rate and affect the long-term price trend.

(6)Other factors. Due to the diversity of goods and a long transport chain, the international container freight rate is impacted by many other factors, such as changes in upstream or downstream industries, weather, port strikes, anti-monopoly amendments, price negotiations for long-term supply agreements, alliance restructuring, and competition.

Major pricing models in the international container maritime transport market

Major pricing models in the international container shipping market include contract pricing and spot market pricing. Contract pricing is an approach whereby a liner signs a long-term transport service agreement with a cargo owner, specifying freight rate calculations, shipping size, and term. This approach can ensure stable cargo source for the liner and proper transport arrangements for the cargo owner. Spot market pricing is an approach whereby a liner sets the freight rate for each voyage in light of market conditions including supply and demand and competition strategies, and makes adjustment according to cargo owners.



COMPILATION AND PUBLICATION OF SCFIS (EUROPE SERVICE)

SSE's Shanghai (Export) Containerized Freight Index based on Settled Rates ("SCFIS") (Europe service) is the underlying index of the SCFIS (Europe service) futures (EC) contract.

Data sources and definition of SCFIS (Europe service)

The freight rates required for the compilation of SCFIS (Europe service) are collected from the panelists of the Europe-US Service Subcommittee under the SSE China (Export) Containerized Freight Index (CCFI) Compilation Committee. As of December 2024, the Subcommittee has 15 panelists, of which 14 (including 10 liner companies and 4 freight forwarders) report the settled freight rates of the Europe service to SSE. The list of the panelists is available on SSE's official website.

SSE has a clear specification on the freight rate information collected from the panelists of the Index Compilation Committee. The specification covers the port of departure, port of destination, cargo type, container type and size, payment method, shipping terms, freight composition, and currency. Specifically, the port of departure is the Port of Shanghai; the port of destination is the base port of the route—Hamburg, Rotterdam, Antwerp, Felixstowe, and Le Havre. The containers are dry cargo containers, including 20-foot General Purpose containers (20GP), 40-foot General Purpose containers (40GP), and 40-foot High Cube containers (40HQ). The cargoes are general cargoes. The payment method is the prepayment of freight. The shipping term is Container Yard to Container Yard (CY/CY). The freight comprises the per-container ocean freight and related surcharges, which include fuel-related surcharge (e.g., BAF/FAF/LSS), currency surcharge (e.g., CAF), peak season surcharge (e.g., PSS), war surcharge (e.g., WRS), port congestion surcharge (e.g., PCS), canal surcharge (e.g., SCS/SCF/PTF/PCC), and other per-container USD ocean freight surcharges.

The spot market for shipping liners is defined as a three-month or less contract market, or a FAK (Freight All Kinds Rates)-based market, or an open market. The spot market for freight forwarders is defined as a market for retail contracts between them and clients, and the transaction price in which is not influenced by such factors as the type of cargo owner or the particulars of container volume.

Compilation rules of SCFIS (Europe service)

The rules governing the compilation of SCFIS (Europe service) mainly include the *Rules for Compilation of SCFI based on Settled Rates (Provisional)*, *Measures of Shanghai Shipping Exchange for Amendments to Index Rules*, *Measures of Shanghai Shipping Exchange for Termination of Indices*, and *Measures of Shanghai Shipping Exchange for the Correction of Index Errors*.

These rules are available on SSE's official website.

Compilation process of SCFIS (Europe service)

Step 1: Data collection

According to the SSE specification, sample companies will, during 0:00-13:00 each Monday Beijing time, transmit information from the executed bills of lading (B/L) for voyages with actual departure time (ATD) between 0:00 last Monday and 24:00 last Sunday through the application program interface (API) automation system. Each B/L contains such information as B/L number (unique), destination port, container volume by container type and corresponding freight rate (freight rate divided by container volume equals the freight rate of the B/L).

Step 2: Data pre-treatment

(1) Verifying the B/L information. SSE uses the manifest data from Shanghai port to verify the information on each reported B/L such as the name of the ship, voyage, and ATD, and check whether the shipping schedule complies with the criteria for inclusion. Non-compliant data are excluded from index calculation.



(2)Checking for duplicated B/L records of liner and freight forwarder. If the forwarder's freight rate is lower than the liner's, the former will not be used.

(3)Removing outliers. SSE first screens out outliers of the freight rates for 20' containers and 40' containers by applying the Grubbs or Pauta tests, then for each container type screens out the highest 10% and lowest 10% of the remaining freight rates from all sample companies.

(4)Limiting over-representation. SSE caps the container volume share of any single sample company by container type at 50%. An over-represented sample company's container volume will be reduced to 50% by multiplying the volume of each B/L of that company with the same coefficient.

Step 3: Index Calculation

After the above steps:

(1)Calculating the average freight rate by container type. The total freight rates of all remaining B/L divided by the total container volume equals the average freight rate.

(2)Calculating the benchmarking freight rate index by container type. The average freight rate divided by the average freight rate on the base date, and then multiplied by 1,000 equals benchmarking freight rate index by container type for the current period.

(3)Calculating SCFIS (Europe service). The weighted average of the benchmarking freight rate index by container type is the SCFIS (Europe service).

For the details of the compilation of SCFIS (Europe service) please refer to the *Rules for Compilation of SCFI based on Settled Rates (Provisional)* published on SSE's official website.

Publication time and frequency of SCFIS (Europe service)

The SCFIS (Europe service) is published on SSE's official website at 15:05 each Monday (Beijing time). If a Monday is not a working day, SSE may publish the index either on that day or the following working day. In the last week of each year, SSE will announce the next year's publication date of the index on its website. In case the State Council adjusts any holiday arrangement at short notice, SSE may change the publication date accordingly. SSE should decide on whether to make the change in one working day after the State Council's notice and, if deciding to change, should announce the decision within 24 hours.

Base date and index point of SCFIS (Europe service)

The base date of SCFIS (Europe service) is June 1, 2020, and the base date index point is 1,000.

Compilation of SCFIS (Europe service) under an emergency

SSE has specified the emergency compilation method for SCFIS in the *Rules for Compilation of SCFI based on Settled Rates (Provisional)*. SSE will use this method to compile SCFIS and publish the index, if the number of sample companies in the current period fails to meet the minimum requirement for a certain route; or a major technical failure suddenly occurs; or there occurs any other emergency event specified in the above Rules. The emergency SCFIS compiled by SSE will have the same effect as the regularly published SCFIS.



Suspension of publication of SCFIS (Europe service)

If there is a lack of sources of data in the spot market for calculating SCFIS due to force majeure (including but not limited to earthquake, war, and strike), SSE has the right to suspend the publication of SCFIS and make a timely announcement.

The publication of the SCFIS (Europe service) has never been suspended since its publication on November 2, 2020.

Termination of publication of SCFIS (Europe service)

According to the Measures of Shanghai Shipping Exchange for Termination of Indices, termination will be considered only when any of the following circumstances occurs: (1) there lacks data sources for index calculation, or the quality of available data sources is not high enough to support stable and accurate index calculation; (2) the index cannot reflect market reality due to any significant changes in market structure and other reasons; (3) there lacks sufficient samples; (4) any regular index review suggests the termination of the index; or (5) any applicable laws or regulations require the termination of the index or any other reasons.

As long as it is feasible, SSE should announce the termination of the index on its official website at least three months in advance and state the background and schedule for the termination. After the announcement, SSE should continue the daily maintenance, calculation, and publication of the index until the termination date.

Correction of SCFIS (Europe service)

According to the *Measures of Shanghai Shipping Exchange for the Correction of Index Errors*, SCFIS errors include errors of external data sources, errors in index compilation, and failures of software, hardware, and other infrastructures. In case a significant error is found in a published index, SSE will decide on whether to recalculate and republish the index after prudent assessment and consultation with the Index Expert Committee. In general, SSE will not deal with any error that occurred more than six months ago.

Data validation and verification for SCFIS (Europe service)

To ensure the stable operation of the SCFIS (Europe service) data collection system and the accuracy, authenticity, integrity, uniqueness, and consistency of the data collected by such system, SSE has established a quarterly data verification regime. Under this regime, SSE: (1) verifies each quarter whether the data transmitted by each sample company to the SCFIS data collection system fall within the specification for freight rates; (2) verifies each quarter the observance of freight rate specification by all sample companies and the operations of the interconnected IT systems; and (3) verifies the production system of each sample company through site inspection or videos.

For the verification of B/L information, SSE uses the manifest data from Shanghai port to verify the information on each reported B/L such as the name of the ship, voyage, and ATD, and check whether the shipping schedule complies with the criteria for inclusion.



Methodologies for the quarterly screening and adjustment of freight rate information from SCFIS (Europe service) sample companies

SSE has developed the *Methodologies for the Quarterly Screening and Adjustment of Freight Rate Information from Sample Companies of Shanghai (Export) Containerized Freight Index based on Settled Rates* as the basis for the screening and adjustment. Each quarter, SSE evaluates and screens the freight rate information collected from a sample company based on whether the sample company is a panelist of the Europe-US Service Subcommittee, the weekly average number of transaction records in the previous quarter, the total number of periods without a transaction record in the previous quarter, whether there is any missed report without justification in the previous quarter, and whether the index system is subject to quarterly validation.

EC: A TRADING GUIDE

The EC contract is traded on the basis of “service index, international platform, RMB denomination, and cash settlement.”

Participation Models

Domestic Traders

Domestic traders can trade EC contracts through domestic Futures Firm Members (“FF Members”); those eligible to apply for INE membership can apply to become non-futures firm members (“Non-FF Members”) to directly trade EC contracts.

Overseas Traders

Overseas traders can trade EC contracts through the Qualified Foreign Investor (QFI) and Specified Domestic Product channels.

Under the QFI channel, overseas traders mainly trade EC contracts directly through a domestic FF Member. This is similar to account opening process for domestic traders.

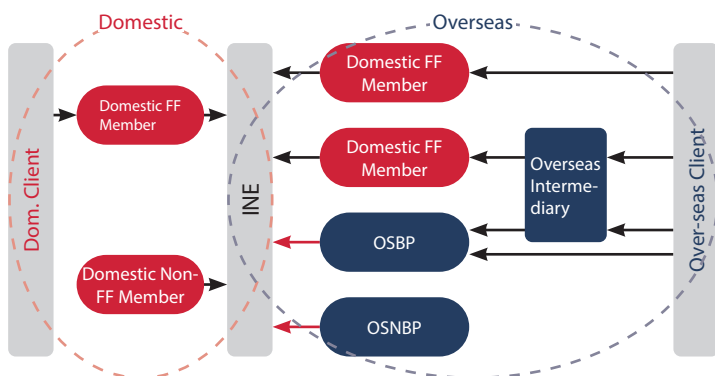
Under the Specified Domestic Product channel, overseas traders can trade EC contacts in the following four ways:

I: Directly through domestic futures firms;

II: Through Overseas Intermediaries that have carrying-brokerage relationship with domestic futures firms or overseas special brokerage participants (“OSBPs”);

III: Through OSBPs;

IV: As overseas special non-brokerage participants (“OSNBPs”).

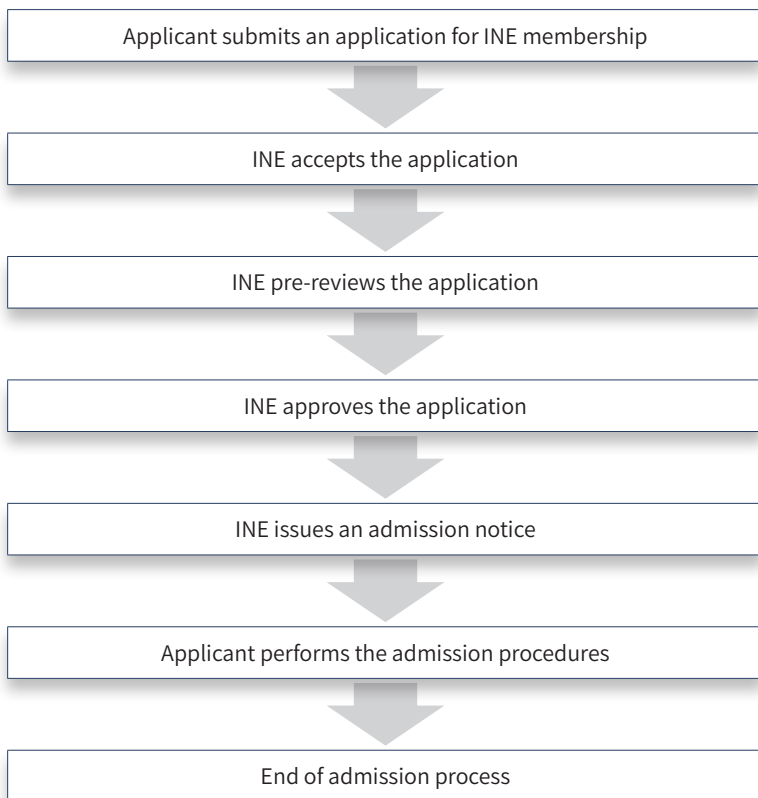


Note 1: Black arrows indicate trading, clearing, and settlement. Gray arrows indicate direct access to trading at INE, but overseas special participants (OSPs) must participate in clearing and settlement through domestic FF Members.

Note 2: The figure above is for reference only. Market access process may vary depending on account-opening channels, jurisdictions of traders, or other factors.

Market Access for Domestic Members and Clients

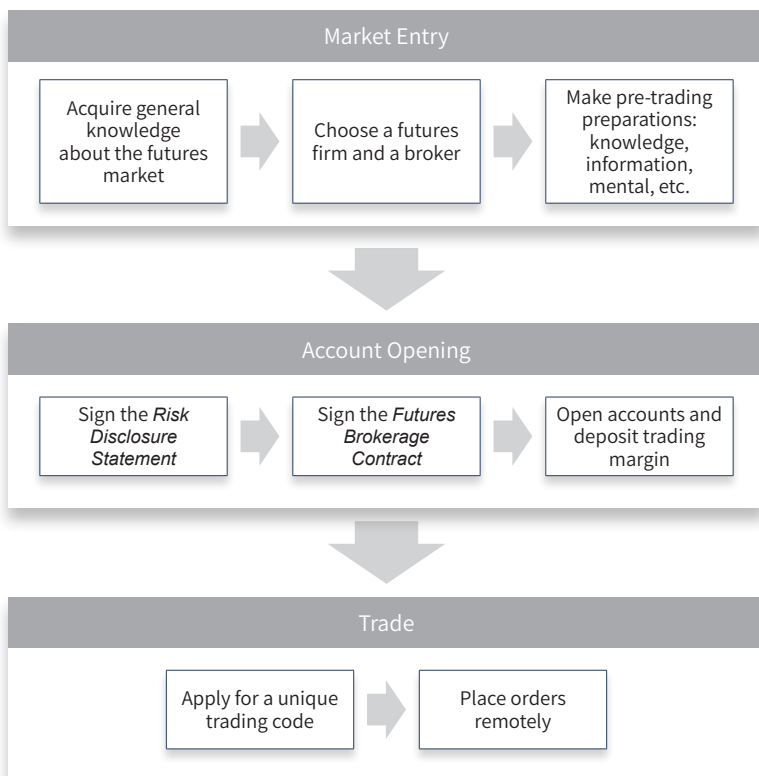
Membership Admission Process



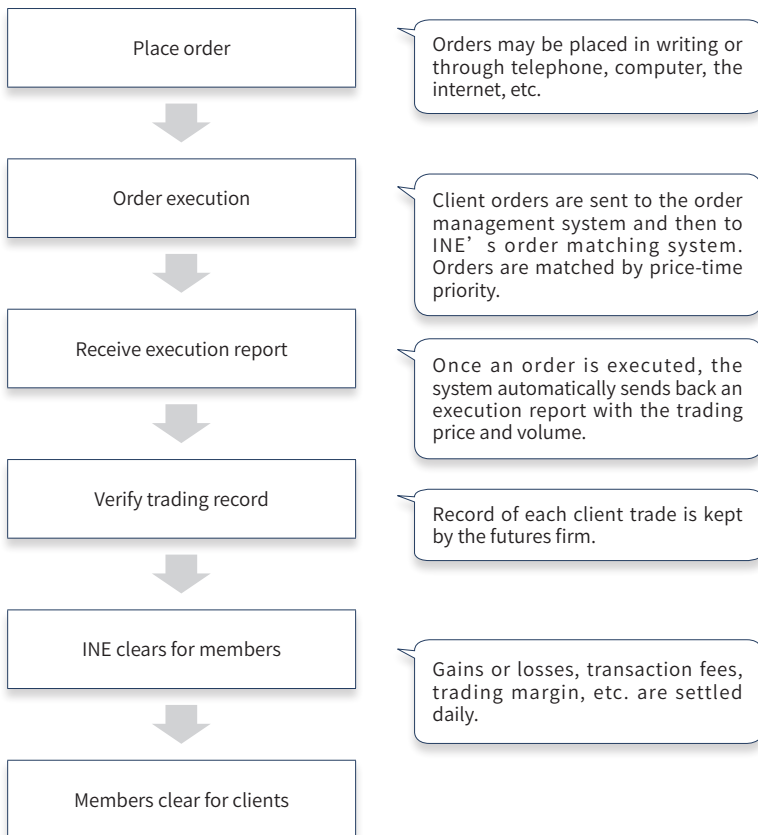
Note: See the INE website: Home→Services→Members and Overseas Special Participants→Become A Member/An OSP→Procedures



Domestic Clients Market Access Process

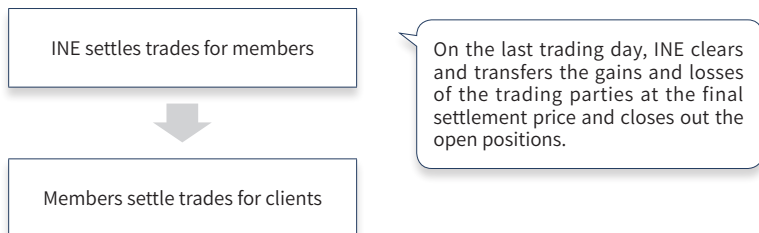


Trading and Clearing Process





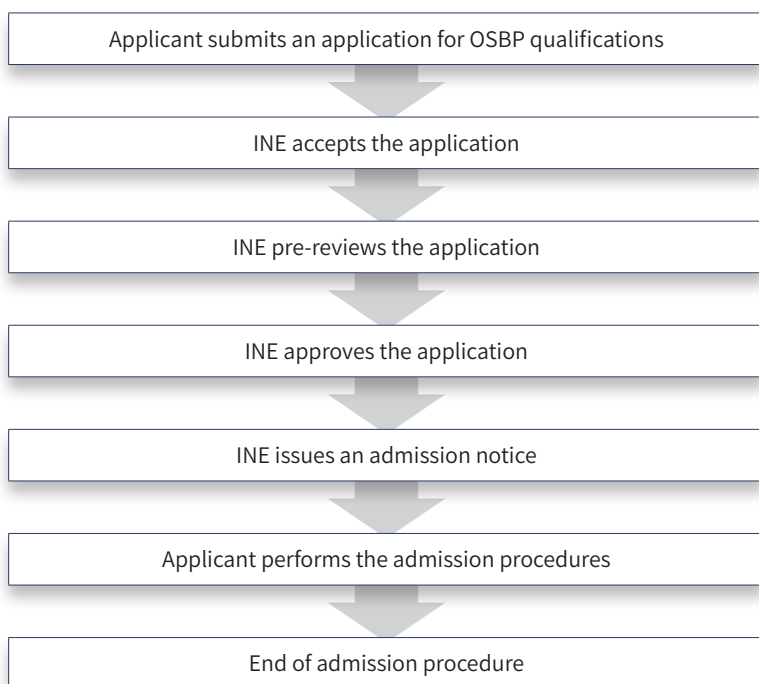
Delivery Process



Market Access for Overseas Traders and Brokers

Qualification Application/Filing Process for OSPs and Overseas Intermediaries

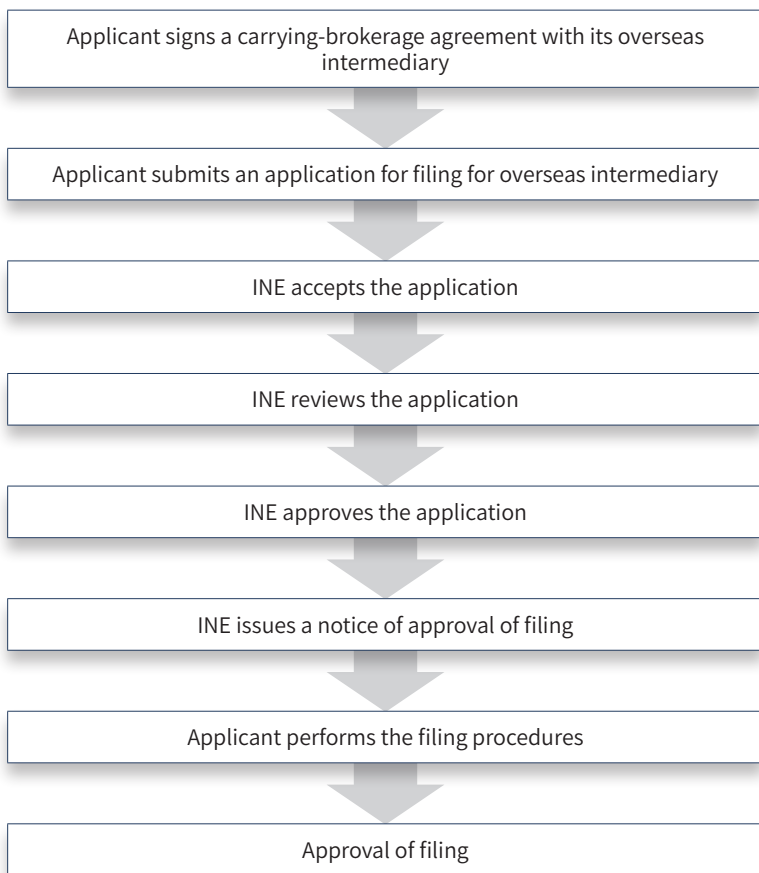
1. Qualification Application Process for OSBPs



Note: See the INE website: Home→Services→Members and Overseas Special Participants→Become A Member/An OSP→Procedures



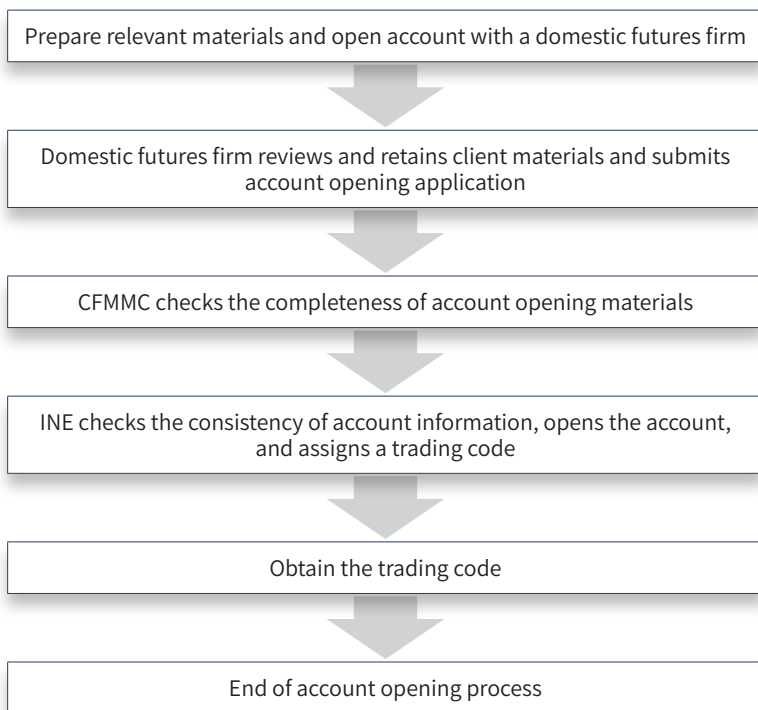
2. Filing Process for Overseas Intermediaries



Note: See the INE website: Home→Services→Members and Overseas Special Participants→Become A Member/An OSP→Filing Process for Overseas Intermediaries

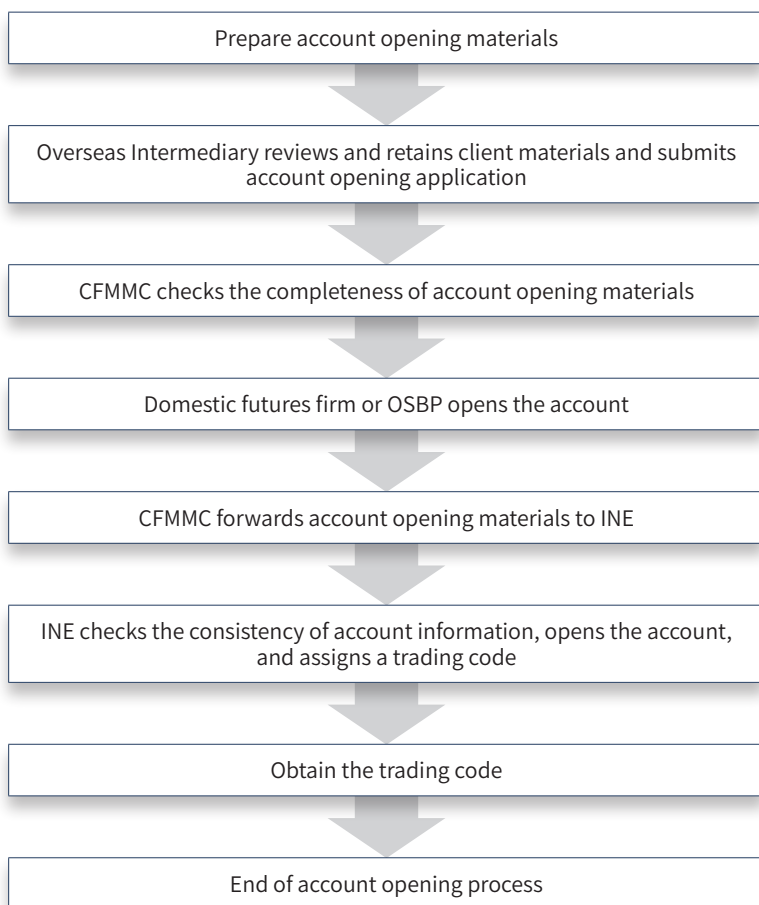
Account Opening Process for Overseas Clients

1. Directly through domestic futures firms

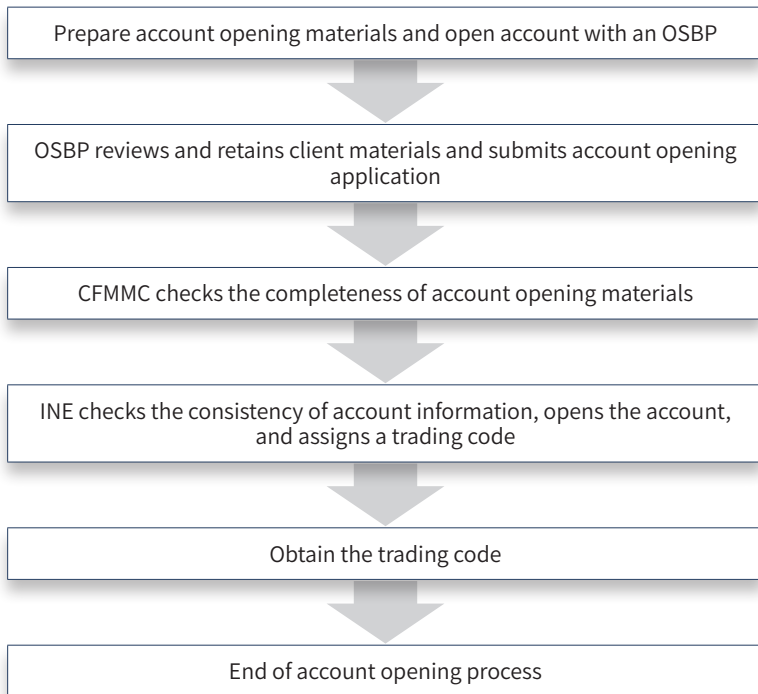




2. Through Overseas Intermediaries that have carrying-brokerage relationship with domestic futures firms or OSBPs

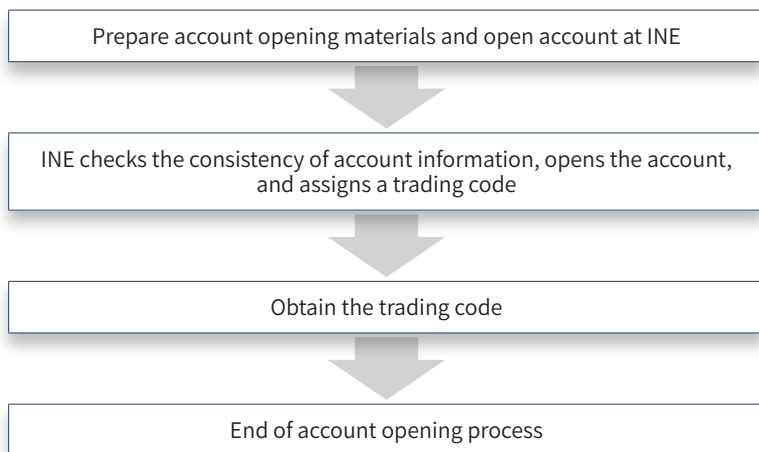


3. Through OSBPs



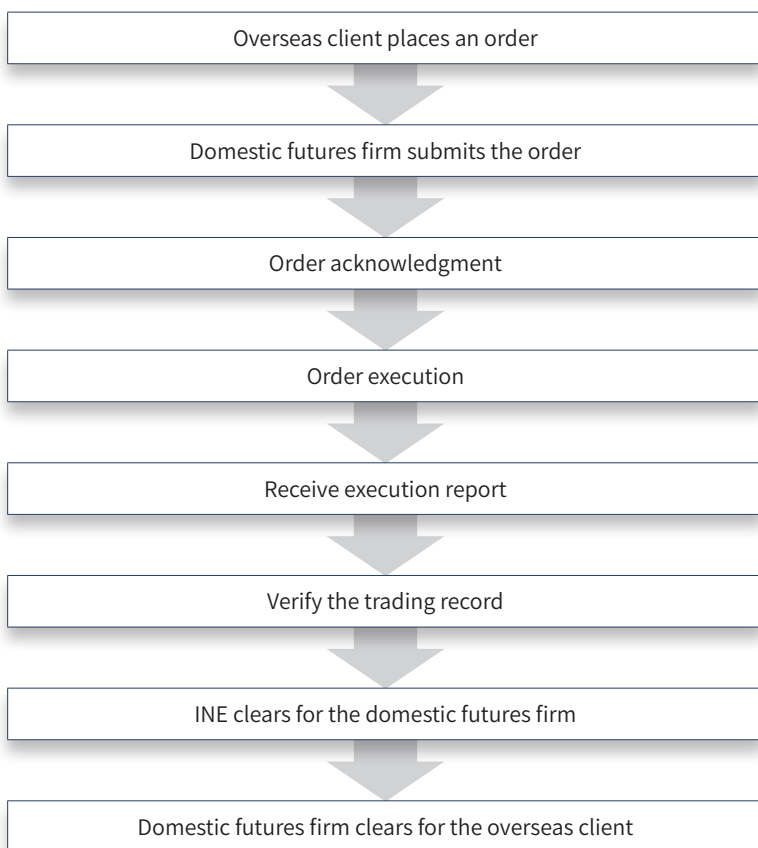


4. As OSNBPs



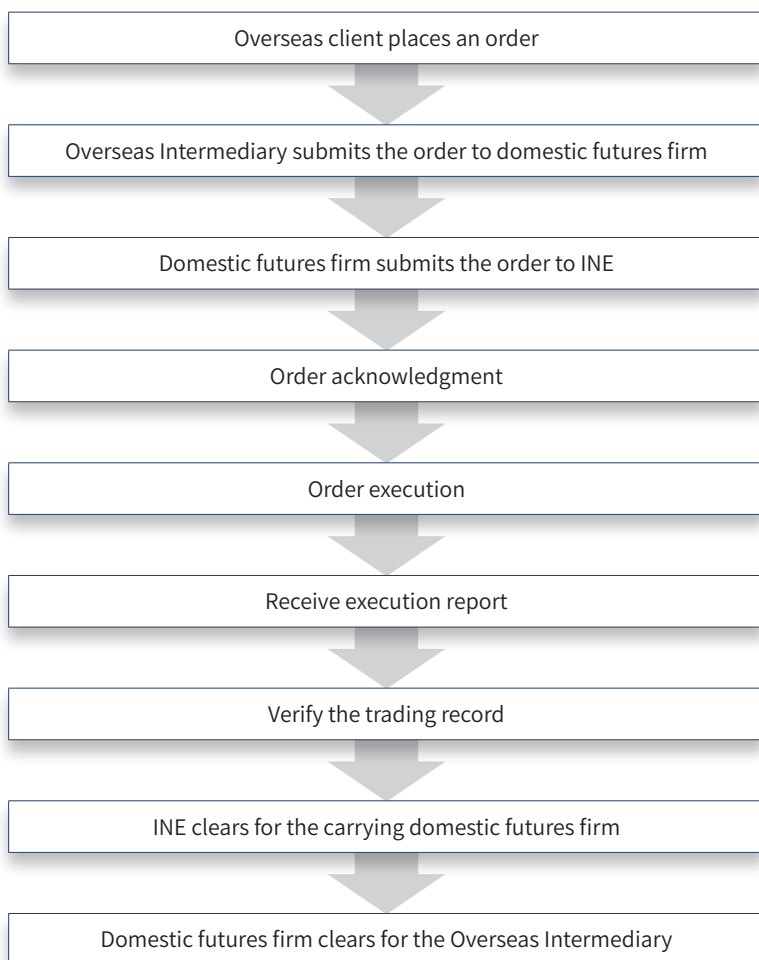
Trading and Clearing Process for Overseas Clients

1. Directly through domestic futures firms

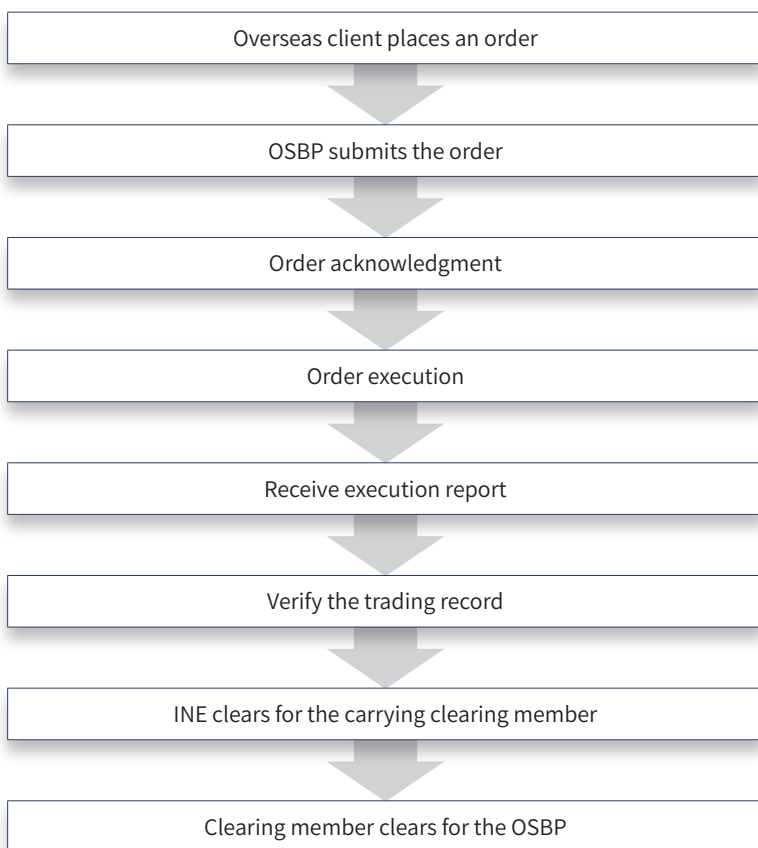




2. Through Overseas Intermediaries that have carrying-brokerage relationship with domestic futures firms or OSBPs

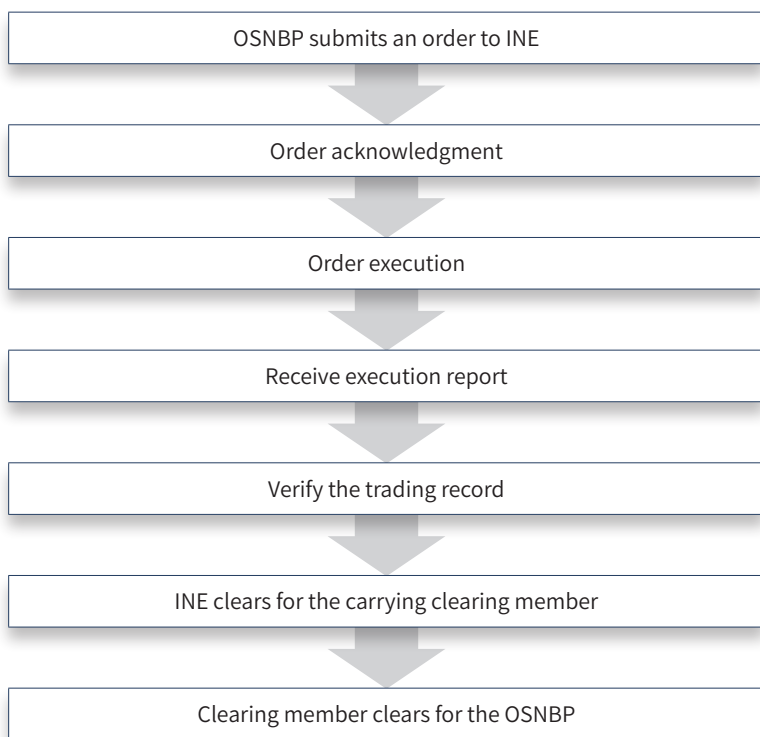


3. Through OSBPs



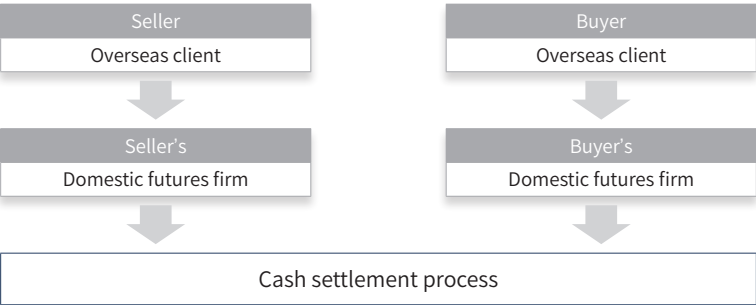


4.As OSNBPs

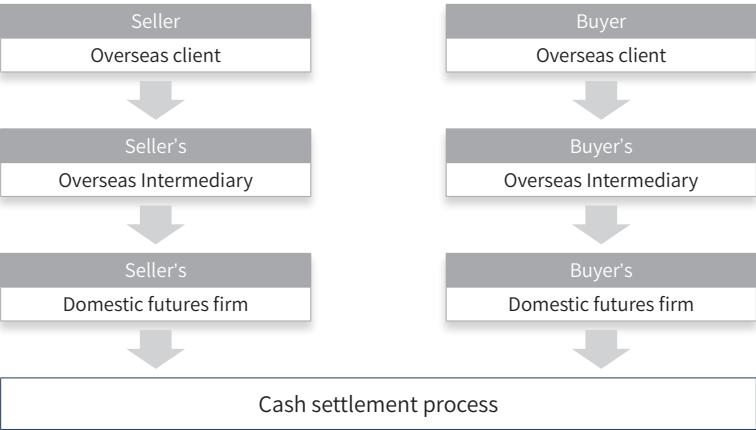


Delivery Process for Overseas Clients

1. Directly through domestic futures firms

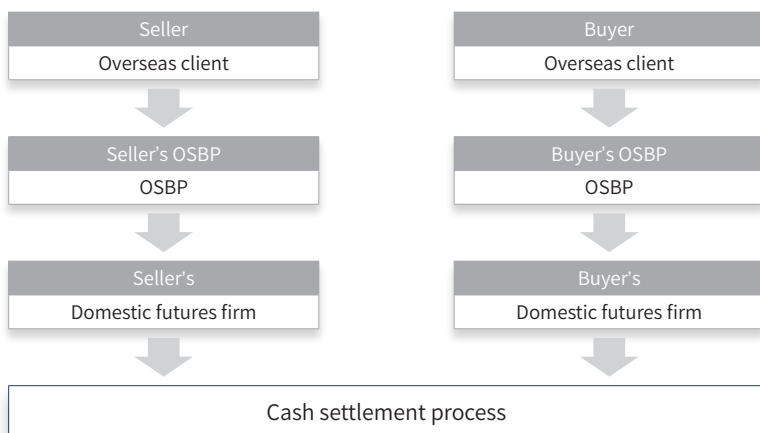


2. Through Overseas Intermediaries that have carrying-brokerage relationship with domestic futures firms or OSBPs

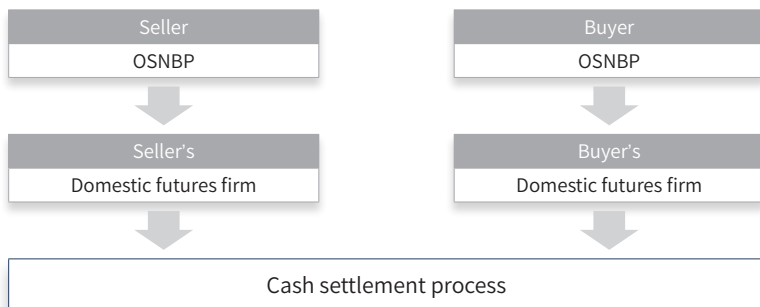




3.Through OSBPs



4.As OSNBPs



Major Futures Trading Rules

Trading margin

- Trading margin refers to the funds deposited by a Member into the dedicated settlement accounts of INE to ensure the fulfillment of contracts and to be used as margin for the positions held by the Member. The minimum trading margin for an EC contract is 12% of the contract value.
- INE sets different rates of trading margin for a futures contract based on its age from listing to last trading day.

Trading margins for an EC contract at different trading periods	
Period of Trading	Minimum Trading Margin as Percentage of the Contract Value
As of listing	12%
As of the seventh trading day before the last trading day	20%
As of the second trading day before the last trading day	30%

Note: The minimum trading margin is subject to the latest announcement of INE.

- At the primary stage after listing, if an investor holds long and short positions, margin is required for both positions instead of the larger-side position only.
- If the trading margin for a futures contract is to be adjusted, INE will, at daily clearing on the trading day before the day on which the new trading margin rate takes effect, settle all open positions in the futures contract based on the new rate. Any Member with insufficient margin is required to meet the new margin requirement before market opens on the next trading day.



Price limits

- Price limit refers to the maximum range the price of a contract may move up or down during a trading day from the settlement price from the previous day. Orders with prices beyond such limit are invalid and will not be executed.
- For an EC contract, the daily price limit is $\pm 10\%$ of the previous settlement price, subject to the latest announcement of INE. The daily price limit on the last trading day is $\pm 20\%$ of the previous settlement price.
- Risk management measures for major price fluctuations

If the cumulative price movement (denoted as N) of an EC contract reaches 18% or more over 3 consecutive trading days (denoted as D1-D3), or 24% or more over 4 consecutive trading days (denoted as D1-D4), or 30% or more over 5 consecutive trading days (denoted as D1-D5), INE may, in view of the market conditions, take one or more of the following measures and report to the CSRC in advance:

- (1) requiring additional trading margins from some or all of the Members and/or OSPs on either or both of the long and short positions at the same or different rates of trading margin;
- (2) limiting the withdrawals of funds by some or all of the Members;
- (3) suspending the opening of new positions by some or all of the Members and/or OSPs;
- (4) adjusting the price limit, but not to be more than $\pm 20\%$;
- (5) requiring the liquidation of positions by a prescribed deadline;
- (6) exercising forced position liquidation; and/or
- (7) taking other measures INE deems necessary.

N is calculated according to the following formula:

$$N = \frac{P_t - P_0}{P_0} \times 100\%$$

Where t = 3, 4, 5 and

P_0 is the settlement price on the trading day preceding D_1

P_1 is the settlement price on trading day D_t for t = 3, 4, 5

P_3 is the settlement price on D_3

P_4 is the settlement price on D_4

P_5 is the settlement price on D_5

Position limit

- Position limit is stipulated by INE, which refers to the maximum position a Member, an OSP, an Overseas Intermediary or a client is permitted to hold.
- A percentage-based (relative) position limit applies to FF Members, OSBPs and Overseas Intermediaries, and a fixed-amount (absolute) position limit applies to Non-FF Members, OSNBPs and clients.

The relative and absolute position limits for an EC contract over its lifecycle are as follows

	From the Day of Listing to the Delivery Month		From the Day of Listing to the Eighth Trading Day Before the Last Trading Day		From the Seventh Trading Day Before the Last Trading Day to the Third Trading Day Before the Last Trading Day		From the Second Trading Day Before the Last Trading Day to the Last Trading Day	
	Open interest of an EC contract (lots)	Relative limit (%)	Absolute limit (lots)		Absolute limit (lots)		Absolute limit (lots)	
		FF Member, OSBP, Overseas Intermediary	Non-FF Member, OSNBP	Client	Non-FF Member, OSNBP	Client	Non-FF Member, OSNBP	Client
EC Contract	≥ 30,000	25	1200	1200	360	360	120	120

Note: The open interest and the position limits in the table are counted by either long or short positions.



Large trader position reporting

A Member, OSP, or client whose general positions in a futures contract reach the general position limit set by INE, or an Overseas Intermediary whose general positions in a futures contract reach or exceed 60% of its general position limit, should voluntarily file a large trader position report with INE by 3:00 p.m. of the following trading day. INE may, at its sole discretion, require specific Members, OSPs, Overseas Intermediaries, or clients to submit large trader position reports or other supporting materials, and may examine these documents from time to time.

Forced position liquidation

INE will forcibly liquidate positions, if:

- (1) the clearing deposit balance of a Member recorded on any of the internal ledgers at INE, whether they are for its own clients or its authorized clearing entities, falls below 0, and the member fails to meet the margin requirement within the specified time limit;
- (2) the open positions of a Non-FF Member, an OSNBP or a client exceed the applicable position limit;
- (3) a violation of INE's rules occurs that warrants a forced position liquidation;
- (4) any emergency happens that warrants a forced position liquidation; or
- (5) any other conditions exist that make the forced position liquidation necessary.

limit-locked market

If a same direction limit-locked market exists on the last 5 trading days (and D1 falls on one of these 5 trading days), trading is permitted until the final settlement. The risks of any other same direction limit-locked market will be managed in accordance with INE's existing risk control rules on limit-locked market.

Risk warning

INE implements a risk warning regime. INE may take one or a combination of the following measures to warn against and resolve risks: (1) requesting an explanation from market participants with respect to a specific situation; (2) conducting an interview to give a verbal alert; (3) issuing a risk warning letter; (4) giving a reprimand; (5) issuing a risk warning announcement; and/or (6) taking other measures deemed necessary by INE.

Response to when the underlying index is not published for three consecutive weeks or is terminated

If the underlying index of EC is not published for three consecutive weeks or is terminated, INE may, pursuant to the *INE Risk Management Rules*, take emergency measures to mitigate risks and announce that an abnormal situation has occurred. In this case, the Board of Directors of INE may take the following emergency measures: adjusting the market opening and closing time, suspending trading, terminating trading, adjusting the price limit, raising the margin requirement, requiring the liquidation of positions by a prescribed deadline, carrying out forced liquidation, suspending funds withdrawals, carrying out forced position reduction, and restricting trading, among others.

Response to corrections of the underlying index

According to the *Measures of Shanghai Shipping Exchange for the Correction of Index Errors*, under certain circumstances the SSE may correct an index value after it has been officially published. To maintain an orderly futures market, the *INE Delivery Rules* provides that, after 3:30 p.m. Beijing time on the last trading day of an EC contract, the final settlement price for the contract as determined by INE rules is not subject to further adjustment.

Regulation of high-frequency trading of EC contracts

INE will charge order submission fees for Clients whose message amount (the number of trading orders such as order placement and order cancellation) and order to trade ratio (OTR) reach a certain threshold on EC contracts.



Clearing Rules

1. Day-to-day clearing

- INE implements daily mark-to-market.
- If, after the completion of daily clearing, a Member's clearing deposit balance on any internal ledger with INE is lower than the prescribed minimum requirement, such clearing result is deemed as INE's margin call to the Member, and the gap between the two amounts is the amount of additional funds required by the margin call.
- Following the margin call, INE may instruct the relevant Designated Depository Bank to transfer the required amount from the Member's dedicated fund account to INE's dedicated settlement account. If a deficiency still exists, the Member must make up the shortfall prior to market open on the next trading day, or the following rules apply:
 - (1) If the Member's clearing deposit balance on any internal ledger with INE is at or above zero, the corresponding Member or OSP of such internal ledger will not be permitted to open any new position;
 - (2) If the Member's clearing deposit balance on any internal ledger with INE is less than zero, INE will carry out forced liquidation or take other measures according to the INE Risk Management Rules.
- After the completion of daily clearing, a Member's clearing deposit balance in RMB on any internal ledger may not be lower than the minimum clearing deposit, otherwise, INE may debit a corresponding amount of RMB funds from the Member's dedicated fund account. If a deficiency still exists, the Member must make up the shortfall prior to market open on the next trading day. If the Member fails to do so, INE may impose forced foreign exchange conversion by unilaterally converting the Member's foreign currency funds in its dedicated fund account or in INE's dedicated settlement account into RMB.

2. Collaterals pledged as margin

- Non-FF Members, OSNBPs, and clients may, subject to INE's approval, use standard warrants, Chinese government bonds, foreign currency funds, and other assets as margin.

- The Clearing Department of INE is responsible for managing margin collaterals. The cutoff time for submitting a deposit or withdrawal application is 3:00 p.m. each trading day. Under special circumstances, INE may postpone the processing time.
- Margin collaterals include:
 - (1) standard warrants;
 - (2) Chinese government bonds;
 - (3) foreign currencies (acceptable types of currency, haircut, and scope of application are prescribed by INE separately); and
 - (4) other assets approved by INE.
- A Non-FF Member or an OSNBP should submit an application to INE to use collaterals as margin. A client should delegate its carrying FF Member, OSBP, or Overseas Intermediary to apply to INE and complete the relevant procedures. Upon receiving the application, INE will verify and complete the posting of the margin collaterals.
- The value of the margin collateral is calculated as follows:
 - (1) For standard warrants used as margin collateral, the settlement price of the day for the front-month futures contract of the product will be used as the benchmark price for calculating the market value of the standard warrants. Prior to the market close of the day, the market value will be provisionally calculated based on the benchmark price of the previous trading day. Standard warrants are subject to a minimum 20% haircut when posted as margin.
 - (2) The benchmark price for other margin collaterals will be determined by INE.

The term “discounted value” means the after-haircut value of the margin collaterals. During the daily clearing, INE updates the benchmark prices of the day and adjusts the discounted values of margin collaterals according to the aforementioned methodology.



Delivery Rules

- EC contracts employ cash settlement.
- The delivery unit of an EC contract is 1 lot. Delivery should be made in the integral multiples of the delivery unit.
- The final settlement price is the benchmark price for the final settlement of an EC contract, and is calculated as the arithmetic mean value of the three SCFIS (Europe service) values published by the SSE on the last trading day of the contract and on the first and second index publication days before the last trading day. In terms of formula:

$$P_T = \frac{P_1 + P_2 + P_3}{3}$$

P_T : The final settlement price of a containerized freight index (Europe Service) futures contract

P_1 : The index value published by the Shanghai Shipping Exchange on the second index publication day before the last trading day of the contract

P_2 : The index value published by the Shanghai Shipping Exchange on the first index publication day before the last trading day of the contract

P_3 : The index value published by the Shanghai Shipping Exchange on the last trading day of the contract

- If the SSE does not publish P_1 and P_2 before 3:05 p.m. Beijing time on the Wednesday of the week when they should be published, or does not publish P_3 before 3:30 p.m. Beijing time on the day when it should be published, INE may determine P_1 , P_2 , and P_3 based on market conditions and announce them to the market on a timely manner.
- The buyer and seller of an EC contract should pay their respective delivery fees to INE during cash settlement. The fee rates are determined and published by INE. INE may, in light of market conditions, adjust the fee rates.

HEDGING WITH EC CONTRACT

- Hedging is a risk avoidance strategy where a trader buys (sells) futures contracts whose underlying asset is of identical type and similar quantity to the commodities to be sold (bought) in the spot market, so that losses suffered in one market will be mostly offset by the gains made in the other market regardless of the price fluctuations in the spot market.
- In relation to the hedging positions in an EC contract, the regular months are the period from the listing day to the eighth trading day before the last trading day; the nearby delivery month is the period from the seventh trading day before the last trading day to the last trading day.
- INE manages hedging positions in EC contracts through a review and approval system. Clients should apply for a hedging quota through their account-opening institutions, which will complete the application process with INE after reviewing the application materials. Non-FF Members and OSNBPs should directly apply to INE for the hedging quota.

1.Materials required from clients applying for the hedging quota for regular months

A Non-FF Member, an OSNBP, or a client needs to submit the following materials in accordance with the contract to apply for the hedging quota for regular months:

- (1) an Application (Approval) Form of Hedging Quota for Regular Months, containing the applicant's basic information, the contracts concerned, the requested hedging quota for regular months, and other information;
- (2) a copy of the business license, a certificate of incorporation, or other documents that can certify the applicant's scope of business;



- (3) business results for the physical commodities in the previous year or the latest audited annual financial report;
- (4) the business plan for physical commodities for the current year or the following year, and any purchase and sale contracts or other valid documentations relevant to the hedging application;
- (5) the hedging strategy, including analyses of the source of risks and hedging objectives;
- (6) hedging management rules, if the applicant is a Non-FF Member or an OSNBP; and
- (7) other materials requested by INE.

A Non-FF Member, an OSNBP or a client may apply for hedging quota for regular months for more than one contract at the same time.

2.Materials required from clients applying for the hedging quota for nearby delivery months

A Non-FF Member, an OSNBP or a client needs to submit the following materials in accordance with the contract to apply for the hedging quota for nearby delivery months:

- (1) an Application (Approval) Form of Hedging Quota for Nearby Delivery Months, containing the applicant's basic information, the contracts concerned, the requested hedging quota for nearby delivery months, and other information;
- (2) a copy of business license, a certificate of incorporation, or other documents that can certify the applicant's scope of business;
- (3) relevant materials which can certify that the applicant has genuine hedging needs, including the production plan for the current year or the previous year, and warrants for the physical commodities, processing orders, purchase and sale contracts, purchase and sale tax invoices, or other valid certificates of the ownership of physical commodities consistent with the quota being requested;

(4) hedging management rules, if the applicant is a Non-FF Member or an OSNBP; and

(5) other materials requested by INE.

If the above materials have been submitted to INE previously and there has been no change thereafter, there is no need to re-submit such materials.

3.Application and use windows for hedging quota

For an EC contract, the application for hedging quota for regular months should be submitted between the listing day and the eighth trading day before the last trading day. No late application will be accepted.

The application for hedging quota for nearby delivery months should be submitted between the first trading day of the month before the delivery month and the fifth trading day before the last trading day. No late application will be accepted.

The hedging quota for nearby delivery months may be repeatedly used between the seventh trading day before the last trading day and the third trading day before the last trading day, but cannot be repeatedly used from the second trading day before the last trading day.



Examples of hedging with EC contracts

- By the type of hedging positions, a hedge is classified into short hedge and long hedge. Short hedge is mainly used by liners, i.e., capacity suppliers, to lock in freight revenues and offset future price declines. Long hedge is mainly used by shippers, i.e., capacity consumers, to lock in freight costs and offset future price increases. Freight forwarders (or non-vessel-operating common carriers (NVOCC)), as intermediaries, may take either the short or long hedge. The specific strategies are as follows.

- Analyses of Application Scenarios

A. Short hedge by liners

As capacity suppliers, liners are carriers that charge freight for supplying container capacity. A liner can hedge against the potential loss from falling freight rate by taking a short position in the EC contract, in order to maintain a reasonable profit margin. Short hedge means first selling futures of a similar quantity to that to be sold in the spot market, and then, at time of the actual sale of capacities, taking a reverse position in the futures product to close out.

B. Long hedge by shippers

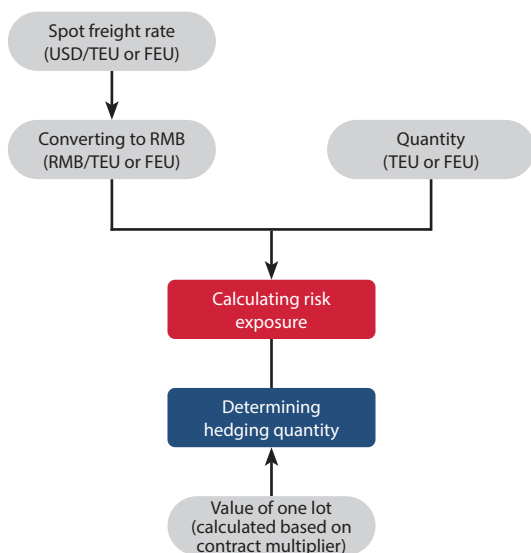
As capacity consumers, shippers will face major uncertainties to keeping import and export costs under control in the case of a rise in freight rates. To manage the transport costs and hedge against a sharp rise in freight rate, a shipper may take a long hedge position in the EC contract, which will reduce its exposure to price fluctuations, i.e., it should first buy futures of a similar quantity to that to be bought in the spot market, and then, at time of the actual purchase of capacities, sell the futures to close out its position.

C. Hedge by freight forwarders (NVOCC)

Freight forwarders, as an intermediary between carriers (liners) and shippers (cargo owners), provide services to both. They forge close ties with carriers (liners, etc.) and book capacity directly from them to meet their selling needs. At the same time, they sell that capacity to shippers (cargo owners) to meet their pre-booking needs.

In real-world scenarios, forwarders have needs for both long and short hedge. If a forwarder signs a long-term freight agreement with a liner, under which it buys a large capacity at a fixed price to be resold to shippers, it stands to profit if the freight rate rises in the future, and lose money if it falls. This creates the need for short hedge in the futures market. Conversely, if the forwarder signs a long-term freight agreement with a shipper, under which it presells a large capacity to the shipper at a fixed price to be bought in turn from a liner, it stands to profit if the freight rate falls in the future, and lose money if it rises. This creates the need for long hedge in the futures market.

In practice, once a forwarder has signed long-term freight agreements with a carrier and a shipper, it will have risk exposures as long as the two agreements differ in the capacity contracted or the freight period. Based on its net position exposure in the different months, the forwarder can then decide whether to take a long or short hedge position in EC contract according to the approaches illustrated above.



When calculating its risk exposure in an EC contract, a company should perform a two-step calculation, namely, exchange of foreign currency and conversion between spot freight rate and index points.

Case Study: Long Hedge by Freight Forwarders

Background: Amid the Red Sea crisis in December 2023, Houthi militant attacks on ships in the Red Sea caused several liners to suspend their Red Sea transits. This indicates a probable surge in Asia-Europe freight rates.

Risk analysis: A freight forwarder had already signed contracts for 50 TEU mid-January shipments at the late-December spot freight rates with some clients. If the spot price kept rising, the company would suffer considerable losses or face significant legal risks if breaching these contracts.

Futures trading: In late December, the freight forwarder purchased 8 lots of EC2404 futures for hedging. On the day of purchase, the futures settlement price was 1,348.6 points, and the rate for Shanghai to Europe service (base port) stood at USD 1,497/TEU. Through this long hedge, the company locked in capacity costs and partially mitigated the spot price upside risk.

As the Red Sea crisis intensified, major liners substantially raised their freight rates. Therefore, the company liquidated its futures positions on January 16 and 17, 2024, at settlement prices of 2,089.4 and 2,028.3 points, respectively. By then, the rate for Shanghai to Europe service (base port) was USD 3,103/TEU.

Hedging outcome: Upon calculation, the company lost some RMB 560,000 in the spot market and gained RMB 290,000 in the futures market, incurring a net loss of RMB 270,000. With the hedge, it effectively transferred the risks posed by the increasing freight rates.



STANDARD CONTRACT

Underlying	Shanghai (export) Containerized Freight Index based on Settled Rates (Europe service)
Contract Multiplier	50 Yuan per index point
Price Quotation	Index point
Minimum Price Fluctuation	0.1 index points
Listed Contracts	February, April, June, August, October, and December
Trading Hours	9:00–11:30 a.m., 1:30–3:00 p.m., and other trading hours prescribed by Shanghai International Energy Exchange (INE)
Daily Price Limit	Within $\pm 10\%$ of the settlement price of the preceding trading day
Minimum Trading Margin	12% of contract value
Last Trading Day	The last futures-trading Monday of the delivery month (INE reserves the right to adjust the last trading day based on national holidays and weekends)
Delivery Period	Same as the last trading day
Delivery Type	Cash settlement
Product Symbol	EC
Listing Exchange	Shanghai International Energy Exchange

Note: The product symbol EC is short for Europe and Containerized Freight. The daily price limit and minimum trading margin are subject to the latest announcements of INE.

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Disclaimer

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