



大连商品交易所
DALIAN COMMODITY EXCHANGE

加快期货品种创新 为中国航运业保驾护航 Accelerating the innovation of futures products Safeguarding the shipping industry of China

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Executive Vice President of DCE

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- 国务院批准设立的四家期货交易所之一
 - 成立于1993年2月28日
- 已上市**17**个期货品种和**2**个期权
 - 涵盖六大领域：粮食、油脂、塑料化工、能源矿产、畜牧和林业
 - 工业品期货（7）：线型低密度聚乙烯、聚氯乙烯、聚丙烯、焦炭、焦煤、铁矿石、乙二醇
 - 农业品期货（10）：玉米、玉米淀粉、黄大豆1号、黄大豆2号、豆粕、豆油、棕榈油、鸡蛋、纤维板、胶合板
 - 期权（2）：豆粕（国内首个商品期货期权）、玉米
- **One of the four futures exchanges approved by the State Council and regulated by the CSRC**
 - Founded on February 28, 1993
- **As of now, a total of 17 futures and 2 options have been listed on DCE**
 - Covering six sectors: grains, oils, petrochemicals, energy and minerals, livestock and forestry
 - Industrial futures (7): LLDPE, PVC, PP, coke, coking coal, iron ore, ethylene glycol
 - Agricultural futures (10): corn, corn starch, No.1 soybean, No.2 soybean, soybean meal, soybean oil, palm olein, eggs, fiberboard, blockboard
 - Options (2): soybean meal (the first commodity futures option in China), corn

➤ 中国重要的期货交易中心

- 2018年，期货年成交量和成交额分别达到9.69亿手（单边，下同）和52.19万亿元
- 2018年，衍生品成交量全球排名第12位（美国期货业协会统计数据）
- 全球最大的农产品、塑料、煤炭、铁矿石期货市场

➤ **Important futures trading center in China**

- In 2018, DCE's annual trading volume reached 969 million lots (unilateral, same below), and its turnover totaled RMB 52.19 trillion
- According to FIA, DCE was the 12th largest exchange in the world by trading volume in 2018
- The world's largest agricultural futures market as well as the largest futures market for plastics, coal, metallurgical coke, and iron ore

习近平总书记视察大商所 President Xi inspects DCE



2013年8月29日，习近平总书记视察大连商品交易所，勉励我们“**脚踏实地、大胆探索，努力走出一条成功之路**”。

On August 29, 2013, President Xi visited DCE and encouraged us to “**discover a way to success for the development of China’s futures market by standing on solid ground while exploring audaciously**”.

1. 航运产业发展亟需风险管理工具

(Shipping Industry Urgently Demands Risk-Management Tools)

2. 上市航运期货具备可行性

(Launch of Freight futures is Feasible)

3. 航运期货合约设计思路

(Design Ideas of Freight Futures Contract)

(一) 航运价格波动对国际贸易影响巨大

- 我国是国际贸易大国
 - 全球第一大出口国，2018年出口额约2.5万亿美元，占比12.8%
 - 全球第二大进口国，2018年进口额约2.1万亿美元，占比10.8%
- 海运费是大宗商品价格的重要成本构成
 - 铁矿石：2012~2018年，海运费平均占比18.9%，2018年最高达36.7%(24美元/吨)
 - 大豆：2008~2018年，海运费平均占比7.0%，2010年最高达17.3%(80美元/吨)
 - 集装箱：2009~2018年，海运费平均占货值的7.5%，2010年最高达11.9%

1.1 The volatility of shipping freight rates has a huge impact on international trade

- China is a major player of international trade
 - The world's largest exporter, exports in 2018 was about 2.5 trillion dollars, accounting for 12.8%
 - The world's second largest importer, imports in 2018 was about 2.1 trillion dollars, accounting for 10.8%
- Ocean freight is an important cost component of commodity prices
 - Iron ore: from 2012 to 2018, ocean freight accounted for 18.9% on average, and in 2018 it reached 36.7% (\$24/ton)
 - Soybean: from 2012 to 2018, ocean freight accounted for 7.0% on average, and in 2018 it reached 17.3% (\$80/ton)
 - Container: from 2009 to 2018, ocean freight averaged 7.5% of the value of goods, up to 11.9% in 2010

一、航运产业发展亟需风险管理工具 (Shipping Industry Urgently Demands Risk-Management Tools)

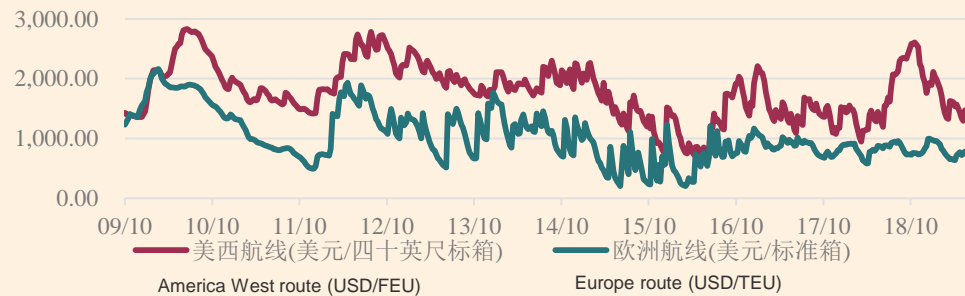
(一) 航运价格波动对国际贸易影响巨大 (续)

- 海运费波动直接影响大宗商品定价
 - 能源、有色金属、粮食等国际大宗商品贸易主流定价模式：“期货价格+升贴水”
 - 海运费是升贴水的主要影响因素
 - 期货价格可在期货市场锁定，升贴水(海运费)波动风险缺少对冲工具

1.1 The volatility of shipping freight rate has a huge impact on international trade (continued)

- The fluctuations of ocean freight directly affect commodity pricing
 - Mainstream pricing model for international commodities such as energy, non-ferrous metals and grains: “Futures price + premium/discount”
 - Ocean freight is the main factor affecting the premium/discount
 - Futures prices can be locked in the futures market, however the premium/discount (ocean freight) fluctuation risks lack related hedging tools

上海至美西、欧洲航线集装箱运价走势
(price of Shanghai-America West route container freight and Shanghai-Europe route container freight)



上海至美西、欧洲集装箱运价波幅
(price fluctuations of Shanghai-America West route container freight and Shanghai-Europe route container freight)

	美西(Shanghai-America West)	欧洲(Shanghai-Europe)
2010	95%	62%
2011	51%	97%
2012	59%	172%
2013	48%	25%
2014	34%	153%
2015	196%	513%
2016	181%	488%
2017	105%	64%
2018	176%	71%

(二) 航运企业现有定价方式面临较大风险

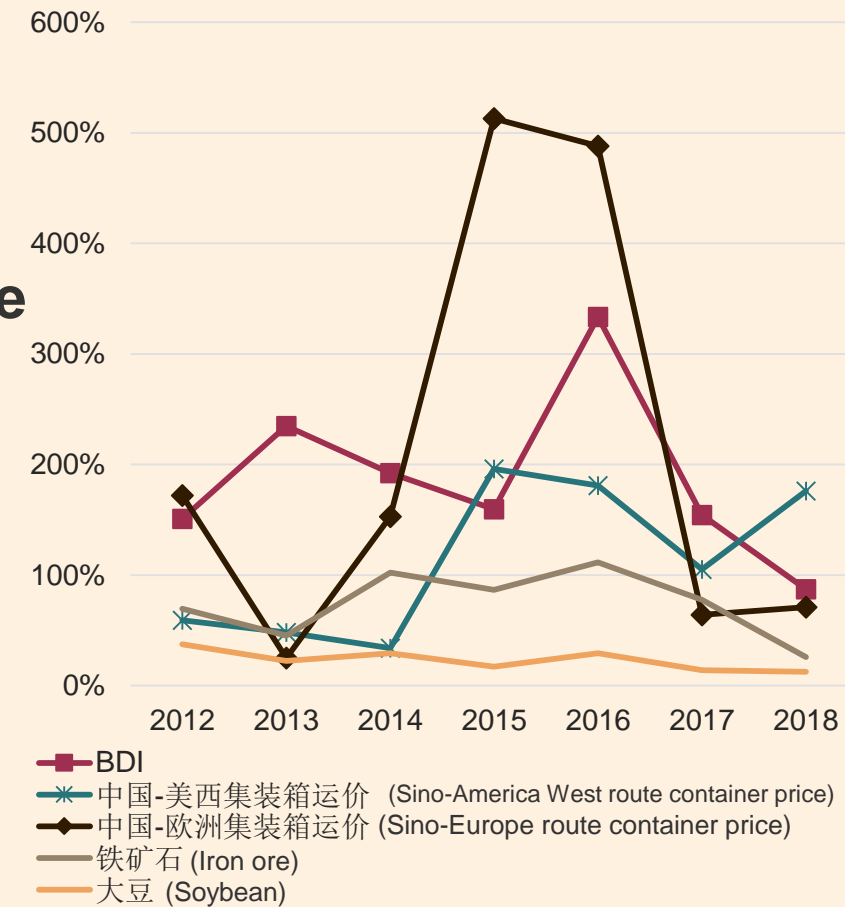
- 长协定价：大型货主和船公司锁定远期舱位与价格
 - 运价上涨，船公司遭受损失
 - 运价下跌，货主遭受损失
- 随行就市：中小企业被动承受运价波动风险
- 海运价格波幅远超一般大宗商品

1.2 Shipping carriers' existing pricing methods face greater risks

- Long-term negotiated pricing: Large cargo owners and shipping companies lock forward cabins and prices
 - If the freight rate rises, the shipping companies will suffer losses.
 - If the freight rate falls, the owners will suffer losses
- Follow the market: SMEs passively bear the risk of freight fluctuations
- Shipping price volatility far exceeds that of general commodity

海运费与大宗商品年度价格波幅比较

Comparison of ocean freight and annual commodity price volatility

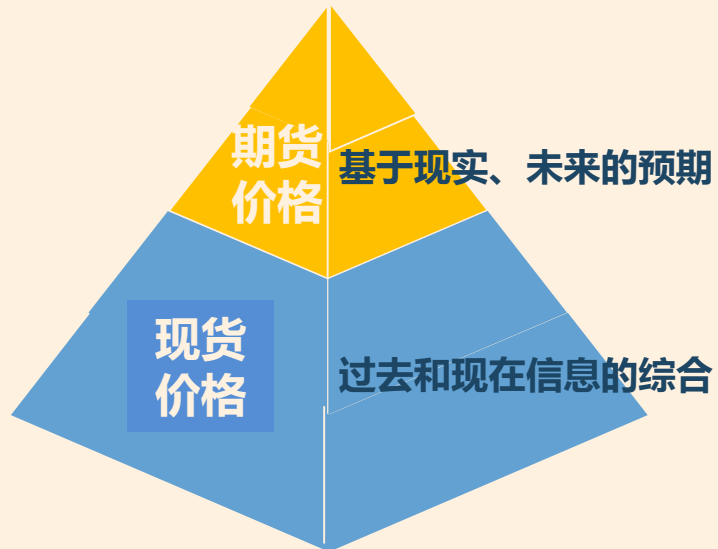


(三) 期货市场形成公开透明的远期价格，为企业提供避险工具

1.3 Futures market generates open and transparent prices, providing end-users with hedging tools

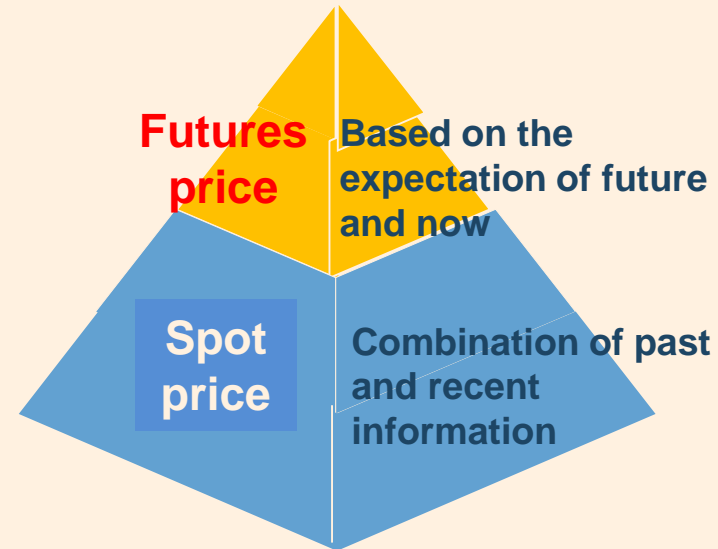
发现远期价格

- 交易主体多样
- 连续公开竞价
- 反映市场未来预期



Price Discovery

- Diversity of market participants
- Continuous public bidding
- Reflect the expectation about the market

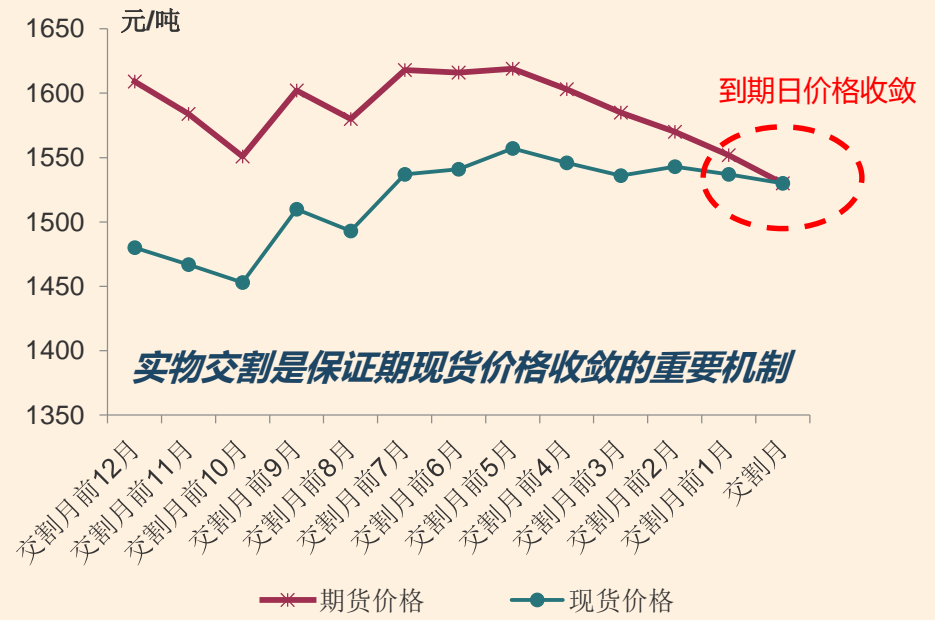


(三) 期货市场形成公开透明的远期价格, 为企业提供避险工具 (续)

1.3 Futures market generates open and transparent prices, providing end-users with hedging tools (continued)

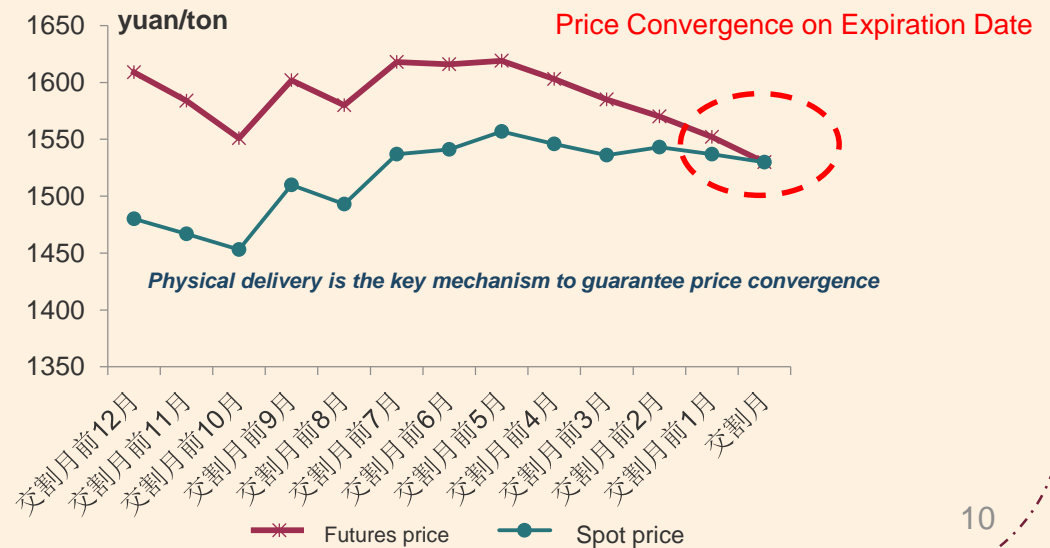
管理运价波动风险

- 船公司: 提前卖出舱位, 锁定利润
- 货主: 提前买入舱位, 锁定成本
- 货代: 按照客户需求, 提前买入/卖出舱位



Risk-Management

- Carriers: Sell capacity in advance and lock in profits
- Cargo Owners: Buy capacity in advance and lock in costs
- Freight Forwarders: Buy/Sell capacity in advance according to orders of customers



(四) 助力企业“走出去”，需要期货保驾护航

1.4 Futures play a core role to help end-users “going abroad”

- 习近平：“推进一带一路建设金融创新，搞好相关制度设计。”
- President Xi: “Promote the financial innovation of the “belt and road” construction and improve relevant regime design.”
- 大宗商品、大宗原材料的输出
- Exportation of commodities and block raw materials.
- 航运期货帮助企业锁定运费成本
- Freight futures help end-users lock in freight costs.



(一) 国内外航运指数的特点

- 国际航运指数市场：波罗的海运费指数（BFI）、波罗的海干散货指数（BDI）
 - 波罗的海交易所1985年推出BFI指数期货，1999年推出BDI指数，2002年BFI指数期货摘牌
 - BDI指数是国际干散货市场走势、全球宏观经济的晴雨表
 - 综合了不同类型散货、不同船型、不同航线
 - 存在问题：基于询价、代表性低、针对性弱

2.1 Features of domestic and international shipping index

- **International shipping index market:** Baltic Freight Index (BFI)、Baltic Dry Index (BDI)
 - Baltic Exchange launched BFI index futures in 1985 and BDI index futures in 1999, while BFI index futures ceased trading in 2002
 - BDI index is the barometer of international dry bulk market trends and the global macroeconomy
 - It combines different types of bulk cargos, different types of ships and different routes
 - Defect : Based on enquiry, low representativeness and weak pertinence

(一) 国内外航运指数的特点 (续)

- 国内航运指数市场：集装箱运价指数、散货运价指数
 - 反映相关市场的晴雨表
 - 存在问题：基于询价、针对性弱、发布频率低（每周或每日发布）
- 可交易指数的设计和开发尚需时日
 - 抗操纵性
 - 发布频率
 - 市场检验

2.1 Features of domestic and international shipping index (continued)

- Domestic shipping index market: Container freight index、 Bulk freight index
 - Barometer to reflect relevant markets.
 - Defect : Based on enquiry, weak pertinence and low frequency (daily or weekly) .
- There is a long way to go to design and develop tradable index
 - Resistance to manipulation
 - Release Frequency
 - Market Test

(二) 远洋集装箱航运具备开展实物交割期货交易的可行性

➤ 细分18个航运市场

- 按照货物种类和船舶类型：集装箱航运、干散货航运、液体散货航运
- 按照船期和航线：班轮和不定期船
- 按照航行区间：远洋、沿海和内河

2.2 Feasibility to implement physical delivery of ocean container freight futures.

➤ 18 subdividing shipping markets

- According to the categories of bulk cargos and ships : Container shipping, dry bulk shipping, liquid bulk shipping
- According to the sail schedule and routes : liner and tramp
- According to the navigation interval : ocean, coastal and inland river

二、上市航运期货具备可行性 (Launch of Freight futures is Feasible)

- 远洋集装箱航运市场：标准化程度高、市场规模大、市场竞争充分
- Ocean Container Shipping Market: high degree of standardization, large market scale and perfect competition

		运输工具	货种	航线、船期
班轮	集装箱	集装箱标箱	无关	固定
不定期船	干散货	船型（海峡、巴拿马、灵便），船龄	种类多	不固定
	液体散货	船型（巴拿马、阿芙拉、苏伊士、VLCC、ULCC），船龄	固定	不固定
		Conveyance	Cargos	Sail schedule and routes
Liner	Container	Container Standard Box	Irrelevant	Fixed
Tramp	Dry bulk cargo	Ship type（Cape-size carrier、Panama carrier、handy-size carrier），Vessel age	Multiple kinds	Not fixed
	Liquid bulk cargo	Ship type（Panama carrier、Aframax carrier、SUEZMAX,VLCC,ULCC），Vessel age	Fixed	Not fixed

- 2017年，我国远洋集装箱运费规模超过2000亿，远高于沿海（730亿）和内河（100亿）
- In 2017, the freight volume of ocean containers in China was over 200 billion yuan, far more than coastal(73 billion) and inland river (10 billion)

(三) 中国-美西的单一航线便于产业客户精准套保

- 中国-北美和中国-欧洲是我国两大主要集装箱出口航线
 - 2017年，中国-北美航线运量约1230万标箱，运费规模约为1140亿元
 - 2017年，中国-欧洲航线运量约1141万标箱，运费规模约为600亿元

2.3 The China-West Coast of North America route is Beneficial for Industry Clients' Precise Hedging

- China-North America route and China-Europe route are two major container export routes of China
 - In 2017, China-North America route had a volume of 12.3 million TEUs, with the total freight of 114 billion yuan
 - In 2017, the China-Europe route had a volume of 11.41 million TEUs, with the total freight of 60 billion yuan

(三) 中国-美西的单一航线便于产业客户精准套保 (续)

- 优先选择北美出口航线中的美西航线
 - 2017年, 美西航线实际运量为817万标箱, 约为美东航线的两倍(413万标箱)
- 起运港(上海、盐田、宁波)和目的港(洛杉矶/长滩)的选择: 具备足够市场规模

2.3 The China-West Coast of North America route is Beneficial for Industry Clients' Precise Hedging (continued)

- Compared to other North American export routes, China-West Coast North America route is preferred
 - In 2017, the actual volume of West Coast North America route was 8.17 million TEUs, about twice the East Coast North America route(4.13 million TEUs)
- The choice of loading ports (Shanghai, Yantian, Ningbo) and destination ports (Los Angeles/Long Beach): need to reach a certain market scale

美西各航线集装箱运量 (TEU) /The container capacity of different America West routes (TEU)				
	洛杉矶/长滩 Los Angeles/Long Beach	奥克兰 /Auckland	塔科马/Tacoma	西雅图/Seattle
上海/Shanghai	1,573,000	153,000	166,000	112,000
宁波/Ningbo	748,000	51,000	55,000	37,000
盐田/Yantian	1,584,000	108,000	118,000	79,000
美西各航线集装箱运量 (TEU) /The container capacity of different US West routes (TEU)				
	洛杉矶/长滩 Los Angeles/Long Beach	奥克兰 /Auckland	塔科马/Tacoma	西雅图/Seattle
上海/Shanghai	145	14	15	10
宁波/Ningbo	69	5	5	3
盐田/Yantian	146	10	11	7

(一) 标的航线：上海-洛杉矶/长滩、深圳-洛杉矶/长滩、宁波-洛杉矶/长滩

上海-洛杉矶/长滩 集装箱运力期货合约草案	
起运港	上海港
目的港	洛杉矶港或长滩港
交易单位	1FEU/手
报价单位	元/FEU
最小变动单位	1元/FEU
涨跌停板幅度	上一交易日结算价的5%
合约月份	1~12月
交易时间	每周一至周五9:00-11:30,13:30-15:00, 以及交易所公布的其他时间
最后交易日	合约月份倒数第4个交易日
最低交易保证金	合约价值的7%
交割方式	实物交割
交易代码	SW
上市交易所	大连商品交易所

深圳-洛杉矶/长滩 集装箱运力期货合约草案	
起运港	盐田港
目的港	洛杉矶港或长滩港
交易单位	1FEU/手
报价单位	元/FEU
最小变动单位	1元/FEU
涨跌停板幅度	上一交易日结算价的5%
合约月份	1~12月
交易时间	每周一至周五9:00-11:30,13:30-15:00, 以及交易所公布的其他时间
最后交易日	合约月份倒数第4个交易日
最低交易保证金	合约价值的7%
交割方式	实物交割
交易代码	YW
上市交易所	大连商品交易所

宁波-洛杉矶/长滩 集装箱运力期货合约草案	
起运港	宁波港
目的港	洛杉矶港或长滩港
交易单位	1FEU/手
报价单位	元/FEU
最小变动单位	1元/FEU
涨跌停板幅度	上一交易日结算价的5%
合约月份	1~12月
交易时间	每周一至周五9:00-11:30,13:30-15:00, 以及交易所公布的其他时间
最后交易日	合约月份倒数第4个交易日
最低交易保证金	合约价值的7%
交割方式	实物交割
交易代码	NW
上市交易所	大连商品交易所

3. Design Ideas of Freight Future Contract

3.1 Subject Routes: Shanghai-Los Angeles/Long Beach, Shenzhen-Los Angeles/Long Beach, Ningbo-Los Angeles/Long Beach

Shanghai-Los Angeles/Long Beach Container capacity future contract draft	
Port of Departure	Shanghai Port
Port of Destination	Los Angeles Port/Long Beach Port
Trading Unit	1FEU/Lot
Price Quote Unit	CNY/FEU
Minimum Tick Size	1 CNY/FEU
Daily Price Limit Range	5% of last settlement price
Contract Months	January to December
Trading Hours	9:00 a.m. – 11:30 a.m., 13:30 p.m. – 15:00 p.m., Beijing Time, Monday to Friday, and other trading hours announced by DCE
Last Trading Day	The 4 th last trading day of the contract month
Minimum Trading Margin	7% of the contract value
Delivery Form	Physical delivery
Ticker Symbol	SW
Listed Exchange	DCE

Shenzhen-Los Angeles/Long Beach Container capacity future contract draft	
Port of Departure	Yantian Port
Port of Destination	Los Angeles Port/Long Beach Port
Trading Unit	1FEU/Lot
Price Quote Unit	CNY/FEU
Minimum Tick Size	1 CNY/FEU
Daily Price Limit Range	5% of last settlement price
Contract Months	January to December
Trading Hours	9:00 a.m. – 11:30 a.m., 13:30 p.m. – 15:00 p.m., Beijing Time, Monday to Friday, and other trading hours announced by DCE
Last Trading Day	The 4 th last trading day of the contract month
Minimum Trading Margin	7% of the contract value
Delivery Form	Physical delivery
Ticker Symbol	YW
Listed Exchange	DCE

Ningbo-Los Angeles/Long Beach Container capacity future contract draft	
Port of Departure	Ningbo Port
Port of Destination	Los Angeles Port/Long Beach Port
Trading Unit	1FEU/Lot
Price Quote Unit	CNY/FEU
Minimum Tick Size	1 CNY/FEU
Daily Price Limit Range	5% of last settlement price
Contract Months	January to December
Trading Hours	9:00 a.m. – 11:30 a.m., 13:30 p.m. – 15:00 p.m., Beijing Time, Monday to Friday, and other trading hours announced by DCE
Last Trading Day	The 4 th last trading day of the contract month
Minimum Trading Margin	7% of the contract value
Delivery Form	Physical delivery
Ticker Symbol	NW
Listed Exchange	DCE

(二) 交割方式为实物交割

- 合约到期时，买卖双方按照规定程序完成集装箱运力的交收
- 卖方为买方按时提供舱位预订、空箱、签发提单、装船运输等服务
- 买方按时向卖方提供订舱信息、提取空箱、完成重箱入港及通关



3.2 Delivery Form-Physical Delivery

- When the contract expires, the buyer and seller complete the delivery of the container capacity according to the prescribed procedures
- The seller provides the buyer with on-time services, including booking, providing empty containers, issuing of bills of lading, shipping and other services
- The buyer provides the seller with booking information, empty containers pick-up, delivering container and customs clearance services

(三) 需要深入研究的重点问题

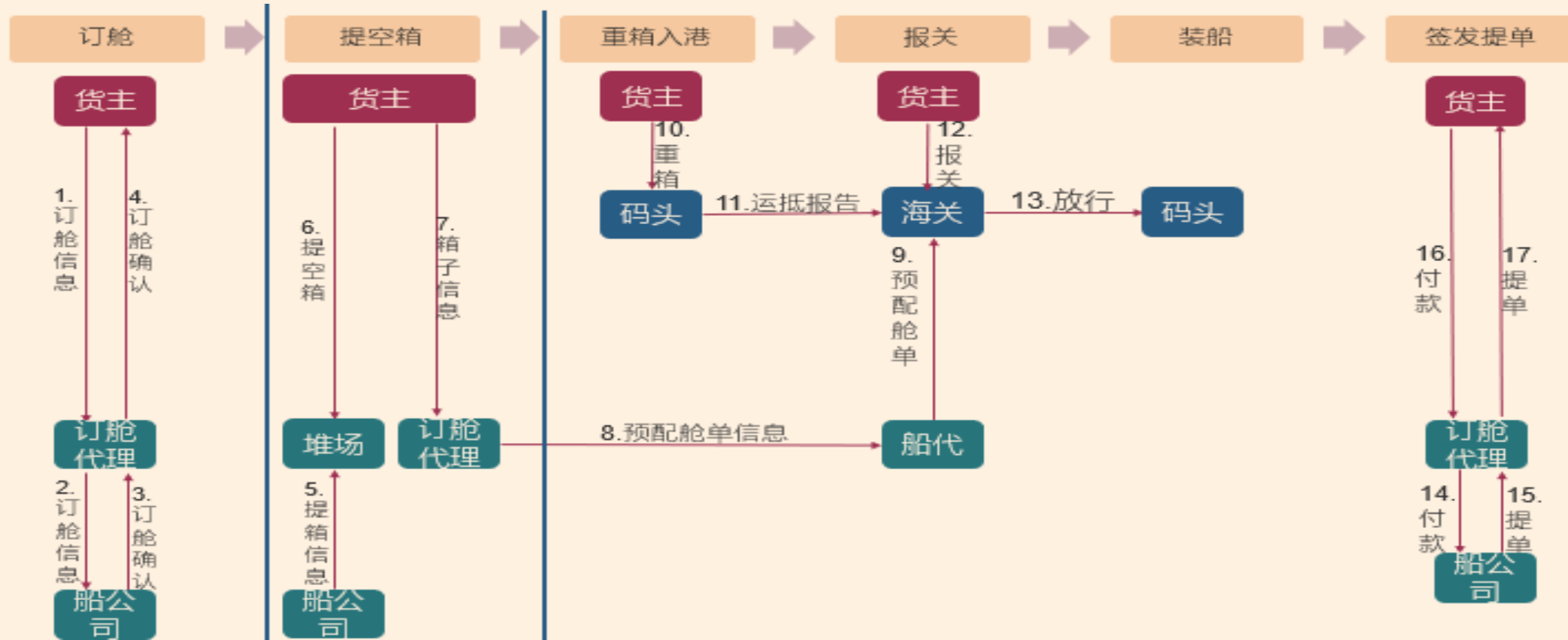
- 标的航线选择：中美贸易冲突的影响
- 交割流程设计：买卖双方责任划断时点的选择
 - 现货交收流程长，节点多
 - 涉及主体众多、权责交错：买方、卖方、堆场、码头、海关等

3.3 Key Issues that Require In-depth Researches

- The choice of subject routes may be influenced by the Sino-US Trade Conflicts
- Delivery process design: determine when to cut off the responsibility of the seller and the buyer
 - The delivery process of physicals is complicated and has lots of nodes
 - Multiple parties are involved, including buyers, sellers, yards, docks, customs, etc

(三) 需要深入研究的重点问题 (续)

3.3 Key Issues that Require In-depth Researches (continued)





谢谢!
THANKS!