上海原油期货和期权市场发展报告

2024 Development Report of Shanghai Crude Oil Futures and Options Market

上海期货交易所 SHANGHAI FUTURES EXCHANGE
上海国际能源交易中心 SHANGHAI INTERNATIONAL ENERGY EXCHANGE

01

Milestones

上海原油期货大事记

2018

2018.03.15 上期能源完成香港自动化交易服务（ATS）注册。

2018.03.26 原油期货作为中国首个国际化商品期货上市。

2018.06.20 国内首船期货原油卸至大连中石油国际储运有限公司指定交割库。

2018.11.15 获得新加坡金融管理局（MAS）批准，成为认可的市场经营者（RMO）。

2019

2019.03.26 发布原油价格指数。

2019.10.30 增加中石化海南原油期货交割存放点，核定库容 100 万立方米，启用 40 万立方米。

2020

2020.04.16 增加大连北方油品储运有限公司作为原油期货指定交割仓库，增加大连中石油国际储运有限公司国际储备库作为原油期货指定交割仓库存放点。

2020.04.17 增加中化弘润石油储运（潍坊）有限公司作为原油期货指定交割仓库。

2020.04.20 达上市以来最高持仓量 18.84 万手。

2020.04.24 增加中国石化集团石油商业储备有限公司广东省湛江市临港工业园兴港大道湛江商储分公司、河北省唐山市曹妃甸工业区曹妃甸商储分公司作为原油期货指定交割仓库存放点。

2020.06.03 上期所和上期能源被纳入欧洲证券及市场管理局（ESMA）的第三国交易场所交易后透明度评估正面清单。

2020.08.01 达上市以来单月最大交割量 1385.9 万桶。

2020.09.07 增加大连中石油国际储运有限公司广西中石油国际储备库作为原油期货指定交割仓库存放点。

2020.10.12 推出原油期货结算价交易指令（TAS），发布日中交易参考价（Marker Price）。

2020.12.01 穆尔班原油被列入上海原油期货的可交割油种之中。自 2021 年 6 月 1 日起，穆尔班原油可入库生成标准仓单，并用于期货交割。

2021

2021.02.03 增加大鼎油储有限公司位于浙江省舟山市定海区临城街道岙山东路油库成为原油期货存放点。

2021.02.09 同意青岛海业摩科瑞仓储有限公司位于山东省青岛市黄岛区董家口港区港润大道油库成为原油期货存放点。

2021.06.21 原油期权在上期能源正式挂牌交易。

2022

2022.05.10 发布原油期货月均结算价。

2022.06.21 同意国投（洋浦）油气储运有限公司位于海南省洋浦经济开发区化学工业园区园一路北侧的油库成为我中心原油期货存放点。

2022.06.24 巴士拉中质原油和图皮原油被列为上海原油期货的可交割油种。自 2022 年 11 月 1 日起，巴士拉中质原油、图皮原油可生成标准仓单，并用于期货交割。

2022.07.06 达上市以来最高成交量 51.6 万手。

2022.09.02 QFI 可参与原油期货、期权等品种交易。

2023

2023.04.24 推出原油期货结算价交易指令（Trade at Settlement，TAS）优化业务。

2023.06.02 同意中国石化集团石油商业储备有限公司位于广东省湛江市临港工业园兴港大道的原油期货指定交割仓库存放点启用库容由 40 万立方米增加至 60 万立方米。

2023.08.25 自然资源部 财政部发布《关于制定矿业权出让收益起始价标准的指导意见》，明确以上海原油期货价格作为油气矿产矿业权出让收益起始价标准。

2023.12.31 境外参与者涵盖 6 大洲（亚洲、非洲、欧洲、北美洲、大洋洲、南美洲）31 个国家和地区。

待续……

2018

2018.03.15 INE completed the registration for Hong Kong Automated Trading Services (ATS)

2018.03.26 Shanghai crude oil futures debuted as China' s first commodity futures product open to international investors.

2018.06.20 The first ship of deliverable crude oil futures was unloaded into the designated delivery storage facility of Dalian PetroChina International Warehousing & Transportation Co., Ltd.

2018.11.15 INE was approved by the Monetary Authority of Singapore (MAS) as a Recognized Market Operator (RMO).

2019

2019.03.26 INE launched the crude oil price index.

2019.10.30 Sinopec Hainan company became a storage site of crude oil futures delivery, with an approved capacity of 1,000,000 cubic meters and an active capacity of 400,000 cubic meters.

2020

2020.04.16 INE approved Dalian North Oil Petroleum Logistics Co., Ltd. as a designated delivery storage facility, and expanded the storage site of Dalian PetroChina International Warehousing & Transportation Co., Ltd..

2020.04.17 Sinochem-Hongrun Oil Staging (Weifang) Co., Ltd. was approved as a designated delivery storage facility for crude oil futures.

2020.04.20 The open interest hit a new high of 188,352 lots.

2020.04.24 Sinopec Petroleum Reserve Co., Ltd. Zhanjiang Branch at Lingang Industrial Zone, Xinggang Avenue, Zhanjiang, Guangdong Province, and Sinopec Petroleum Reserve Co., Ltd. Caofeidian Branch at Caofeidian Industrial Zone, Tangshan, Hebei Province became the storage sites of designated delivery storage facility.

2020.06.03 SHFE and INE were added to ESMA' s positive list for post-trade transparency as third-country trading venues.

2020.08.01 The monthly delivery quantity hit a new high of 13.859 million barrels.

2020.09.07 Guangxi PetroChina International Reserve Depot of Dalian PetroChina International Warehousing & Transportation Co., Ltd. became a storage site for crude oil futures.

2020.10.12 INE launched TAS (Trade at Settlement) order and released the Marker Price.

2020.12.01 Murban crude oil was added as another deliverable crude oil, eligible to be loaded in for the issuance of standard warrants and futures delivery from June 1, 2021.

2021

2021.02.03 The depot of Dading Petroleum Logistics Co., Ltd. at Aoshan East Road, Lincheng Sub-District, Dinghai District, Zhoushan, Zhejiang was approved as a storage site of crude oil futures.

2021.02.09 The depot of Qingdao Haiye Mercuria Oil Terminal Co., Ltd. at Gangrun Avenue, Dongjiakou Port, Huangdao District, Qingdao, Shandong was approved as a storage site for crude oil futures.

2021.06.21 Crude oil options were listed on INE.

2022

2022.05.10 INE released the Monthly Average Settlement Price (MASP) for crude oil futures.

2022.06.21 The depot of SDIC Oil & Gas Terminal Yangpu Co., Ltd. located to the north of Park Road No. 1, Chemical Industry Park, Yangpu Economic Development Zone, Hainan Province, was approved as a storage site for crude oil futures.

2022.06.24 Basrah Medium and Tupi were included as deliverable crudes for the Shanghai crude oil futures. They could be used for standard warrants issuance and futures delivery from November 1, 2022.

2022.07.06 The trading volume of INE crude oil futures hit a record high of 515,989 lots since its listing.

2022.09.02 QFI was approved to trade crude oil futures and options products.

2023

2023.04.24 INE improved TAS orders of crude oil futures.

2023.06.02 INE approved an expansion of the active capacity of the storage site operated by Sinopec Petroleum Reserve Co., Ltd. at the Lingang Industrial Zone, Xinggang Avenue, Zhanjiang, Guangdong Province, increasing from 400,000 cubic meters to 600,000 cubic meters.

2023.08.25 The Ministry of Natural Resources and the Ministry of Finance issued the Guiding Opinions on Setting Starting Price Standards for the Mining Rights Grant Fee, setting the starting price standard for the grant fee of oil and gas mining rights based on the price of Shanghai crude oil futures.

2023.12.31 INE’s overseas investors covered 31 countries and regions across 6 continents (Asia, Africa, Europe, North America, Oceania, and South America).

To be continued……

获奖情况

2023 年，上海期货交易所和上海国际能源交易中心在亚洲能源风险奖（Energy Risk Asia Awards 2023）上获得“年度最佳大宗商品交易所奖”。亚洲能源风险奖颁奖典礼每年举办一次，旨在表彰那些为大宗商品市场的能源风险管理做出卓越贡献的公司。

Honors

At the Energy Risk Asia Awards 2023, Shanghai Futures Exchange (SHFE) and Shanghai International Energy Exchange (INE) won “Commodity Exchange of the Year.” The awards ceremony is held annually to recognize excellent companies that have contributed positively to energy risk management in the commodity market.

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2024年上海原油期货和期权市场发展报告

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2023 年，国际油价在宏观经济弱预期、OPEC+ 大幅减产以及地缘政治对基本面的影响下宽幅震荡。上海原油期货（品种代码：SC）价格与境外原油期货价格总体保持高度联动，同时更快速地反映区域现货市场变化，境外交易者参与度明显提升。原油期权定价合理，与原油期货联动紧密，市场规模呈现快速增长态势。

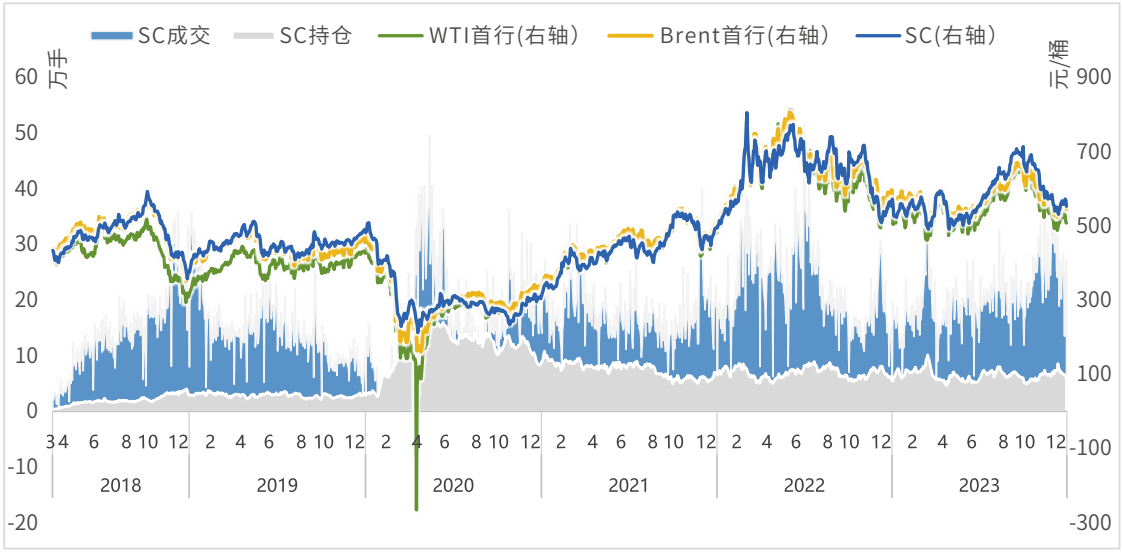
一、上海原油期货价格与境外市场高度联动，同时较好地反映了区域现货基本面变化特点

（一）国际油价总体呈现宽幅震荡走势

2023 年，国际油价在宏观经济弱预期、OPEC+ 大幅减产以及地缘政治对基本面的影响下宽幅震荡。一季度，中国陆上和航空交通量持续攀升，原油需求集中复苏，但欧美国家持续加息以及美国银行业流动性危机引发市场对经济衰退和金融风险的担忧，油价震荡并在一季度末跌至年内低点。二季度，OPEC+ 成员国先后宣布自愿减产，支撑油价快速反弹。但在美国经济衰退预期下，油价震荡回落。三季度，中国出台一系列经济刺激政策，同期美国 GDP 数据强劲，市场对欧美经济衰退担忧情绪缓和，油价在需求复苏和 OPEC+ 减产共同作用下强势上行至年内高点。四季度，随着 OPEC+ 出口量回升和需求旺季结束，油价高位回调。期间，巴以冲突及红海紧张局势也给油价带来短期支撑。

截至 2023 年 12 月 29 日（周五），上海原油期货（SC）主力合约结算价 552.5 元 / 桶（约合 77.84 美元 / 桶），年内跌幅 3.41%。Brent 原油期货主力合约结算价 77.04 美元 / 桶，WTI 原油期货主力合约结算价 71.65 美元 / 桶，年内跌幅分别为 6.16% 和 6.86%。2023 年，SC 与 Brent、WTI 原油期货相关系数分别为 0.91 和 0.93。

图1 上海原油期货运行概况



数据来源：上海国际能源交易中心、路透

（二）境内外价差反映现货基本面差异，期货仓单量反映市场自身特点

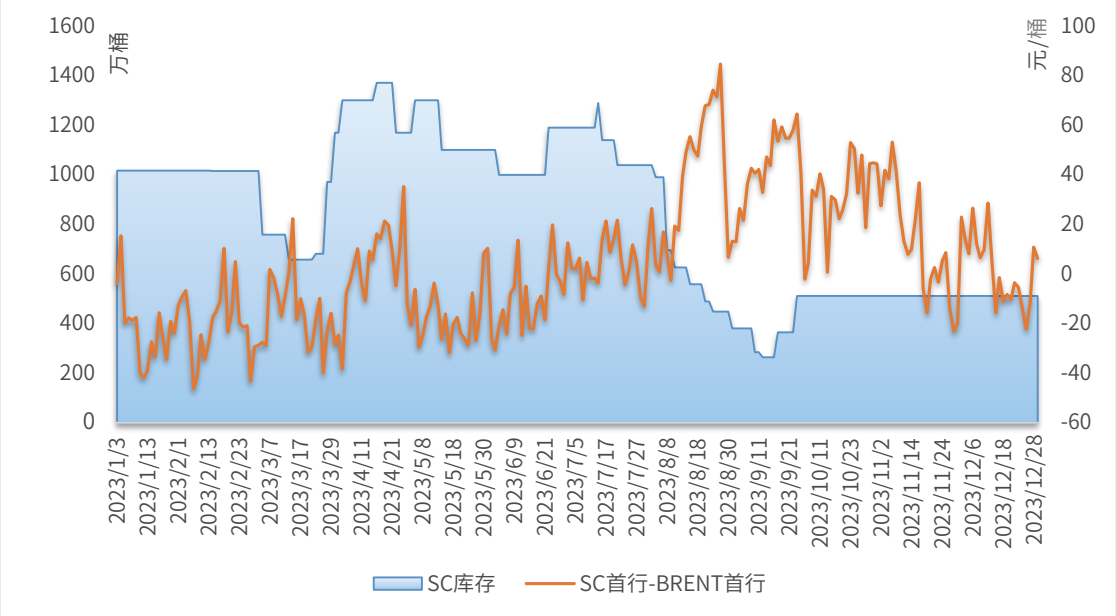
2023 年，在内需恢复和炼能扩张下，我国原油加工量显著上升，带动原油进口量增长。全年原油表观消费量约为 7.73 亿吨，同比上升 8.41%；进口原油 5.64 亿吨，同比增长 10.96%。陆上原油库存呈现上半年累库、下半年去库的态势。SC 库存较好地体现了国内原油总体库存变化和炼厂开工率变化。SC 首行合约较 Brent 原油期货首行合约的贴水呈现前低后高的走势，与 SC 库存呈现较为明显的负相关性。

具体看，上半年，在全球宏观经济衰退预期下，国内炼厂开工率从高位小幅下滑。SC 仓单库存维持年内高位，并在 4 月达年内最高 1371.4 万桶。期间，SC 首行合约价格低于 Brent 首行合约，价差最低至 -46 元 / 桶。

三季度开始，随着欧美经济衰退担忧情绪缓和，以及国内各项经济刺激政策出台，国内炼厂开工率恢复至历史高位，SC 买入预期明显提升，带动仓单快速去化和 SC 价格走强。期货库存在 9 月中旬降至 264.6 万桶的年内最低水平。期间，叠加人民币兑美元汇率走弱影响，SC 首行合约与 Brent 首行合约价差扩大至 74 元 / 桶。

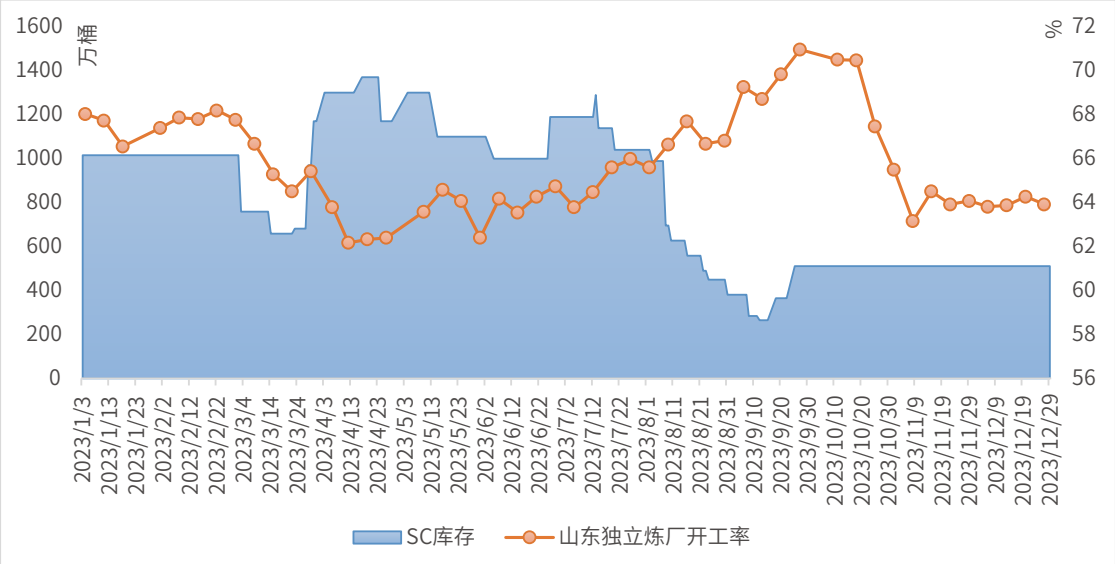
四季度以来，受全球宏观基本面偏弱，内需增长放缓，叠加成品油出口配额和年底原油进口配额紧张等因素，国内炼厂开工率下滑。期间，SC 小幅累库，库存维持在 511.8 万桶。SC 和 Brent 价差逐步收窄。

图2 2023年境内外原油期货价差与SC库存变化



数据来源：上海国际能源交易中心、路透

图3 2023年山东独立炼厂开工率与SC库存变化



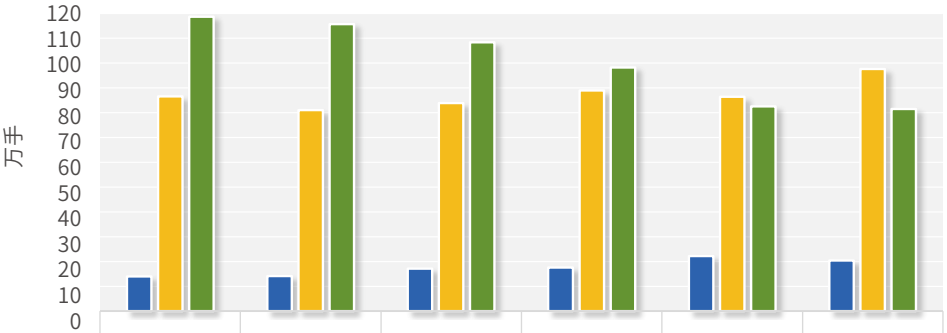
数据来源：上海国际能源交易中心、路透

二、上海原油期货、期权联动发展

（一）上海原油期货市场规模维持上市以来高位，市场参与者结构日益完善

为有效防范地缘政治风险以及境外宏观经济下行风险传导，2023 年上半年，上海原油期货保证金维持在 15% 的较高水平。此外，由于 2023 年价格波动率较 2022 年明显下降，上海原油期货市场成交持仓规模整体小幅下滑。2023 年，上海原油期货日均成交 20.47 万手（单边，下同），同比下降 7.53%；日均持仓 6.51 万手，同比下降 6.01%；累计成交金额 28.78 万亿元，成为中国期货市场成交金额最大的品种。

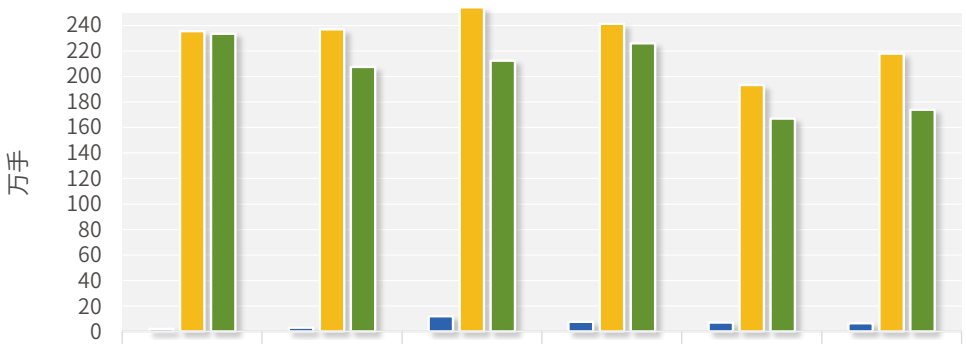
图4 上海原油期货日均成交情况



	2018年	2019年	2020年	2021年	2022年	2023年
SC	14.03	14.20	17.11	17.55	22.14	20.47
Brent	86.57	81.03	80.94	89.03	86.49	97.70
WTI	118.70	115.72	108.35	98.20	82.55	81.47

数据来源：上海国际能源交易中心、路透

图5 上海原油期货日均持仓情况

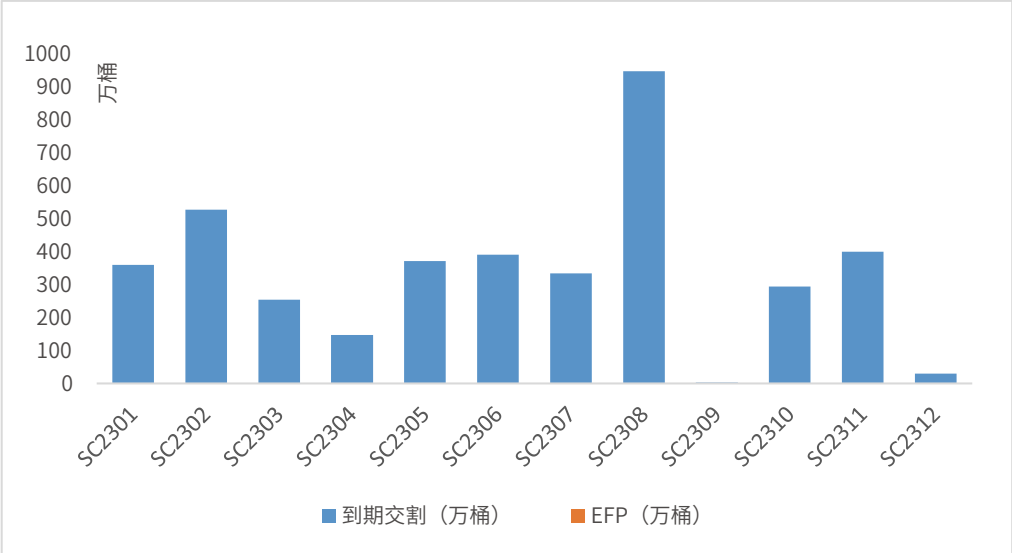


	2018年	2019年	2020年	2021年	2022年	2023年
SC	1.98	2.88	11.89	7.54	6.93	6.51
Brent	235.59	237.17	254.30	241.53	193.28	217.82
WTI	233.67	207.59	212.43	226.14	166.89	174.02

数据来源：上海国际能源交易中心、路透

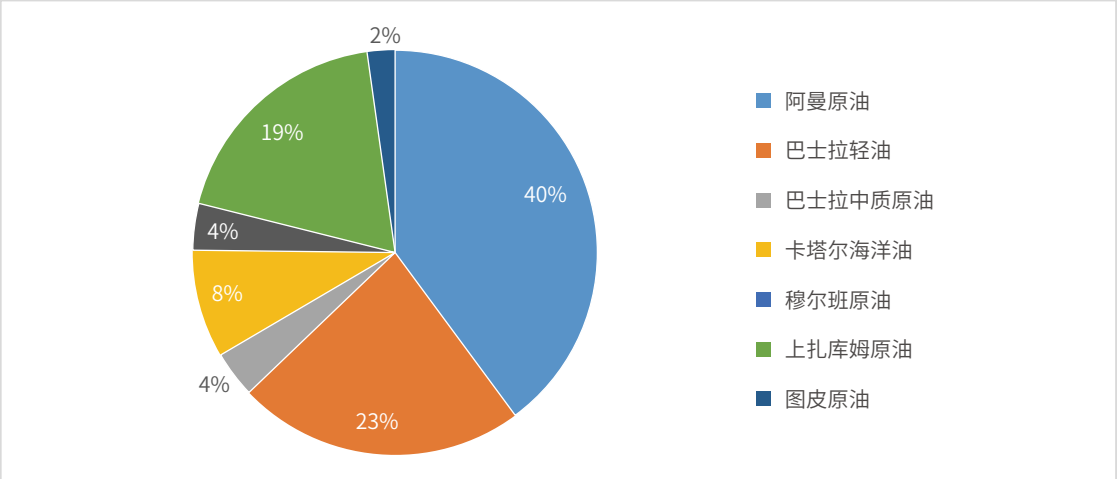
交割方面，为更好地满足市场交割需求，上期能源于 2023 年 6 月将中国石化集团石油商业储备有限公司的启用库容从 40 万方扩大至 60 万方。截至 2023 年底，上海原油期货共有 10 家交割仓库合计 17 个存放点。其中，上海市 1 个，广东省 2 个，浙江省 3 个，山东省 4 个，辽宁省 3 个，海南省 2 个，河北省 1 个，广西省 1 个，总核定库容 1799 万方，启用库容 1212 万方。从交割情况看，年内原油期货共交割 40608 手（合 4060.8 万桶），交割金额 234.51 亿元。其中，8 月合约是交割量最大的合约，交割量达 9476 手，约合 56.69 亿元；阿曼原油是交割量最大的油种，交割量为 1.62 万手，占全市场总交割量约 40%，约合 97.03 亿元。2023 年注销的期货仓单中，报关进口的数量约占四成，转运出境的数量约占一成，转为保税现货的数量占一半左右。

图6 2023年上海原油期货合约交割量



数据来源：上海国际能源交易中心

图7 2023年原油期货各油种交割占比



数据来源：上海国际能源交易中心

表1 原油期货指定交割仓库及库容

序号	指定交割仓库	存放点	核定库容	启用库容
1	中国石化集团石油商业储备有限公司	中国石化曹妃甸	100	40
2		中国石化日照	120	100
3		中国石化舟山	80	70
4		中国石化湛江	90	60
5		中国石化海南	100	60
6	中石油燃料油有限责任公司	中油湛江	70	50
7	中化兴中石油转运（舟山）有限公司	中化兴中	100	35
8	大连中石油国际储运有限公司	中油大连保税库	145	145
9		中油大连国际储备库	180	180
10	山东省港口集团有限公司	中油广西国际储备库	20	20
11		青岛港实华	40	40
12		青岛港海业	100	40
13	洋山申港国际石油储运有限公司	洋山石油	30	20
14	大连北方油品储运有限公司	北方油品	40	10
15	中化弘润石油储运（潍坊）有限公司	弘润油储	500	300
16	大鼎油储有限公司	大鼎油储	44	22
17	国投（洋浦）油气储运有限公司	国投洋浦油储	40	20

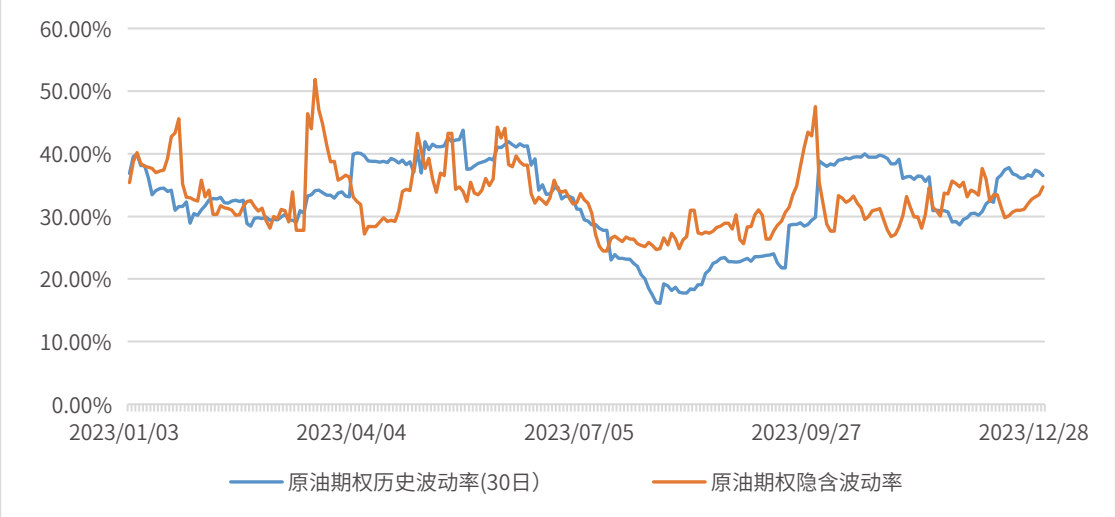
数据来源：上海国际能源交易中心,单位（万立方米）

市场参与者结构方面，原油期货法人客户日均成交占比超过五成，日均持仓占比超过七成。机构交易者的交易、持仓和套期保值比例位居境内已上市期货品种前列。从境外交易者参与情况看，在 2022 年 9 月引入 QFI 参与上海原油期货交易以来，境外交易者参与的方式更加多元化，成交占比明显提升。2023 年，境外交易者日均成交、日均持仓占比均超过三成。跨国石油公司、贸易商、投资银行、基金和资产管理公司中的标杆性企业均参与了上海原油期货交易。截至2023年底，境外交易者覆盖了六大洲31个国家和地区。境外特殊参与者共2家，备案的境外中介机构达 80 家。

（二）原油期权运行平稳，市场规模快速增长

2023 年，原油期权市场运行平稳，定价总体合理，主力系列隐含波动率基本处于 20%~40% 的区间，走势总体与标的期货的历史波动率一致，较好地反映出预期波动情况。

图8 2023年原油期权隐含波动率和历史波动率情况



数据来源：上海国际能源交易中心、路透

原油期权与标的期货联动紧密。当标的原油期货市场价格大幅波动时，期货成交量大幅变化时，期权成交量也相应变化，期权、期货共同管理价格风险的特征明显。2023 年，上海原油期权日均成交量 5.90 万手，同比上涨 116.26%；日均持仓量 3.39 万手，同比上涨 55.25%；日均成交额 3.71 亿元。市场规模呈现快速增长特点。期权相对标的期货的成交占比为 28.84%，较 2022 年上升超 16 个百分点，反映投资者更多地运用期权管理风险。其中，一般法人客户成交占比较 2022 年上升超 6 个百分点，单位客户参与度不断提升，2023 年境外客户成交占比较 2022 年上升约 17 个百分点，国际化程度明显提升。

图9 2023年原油期权成交持仓情况

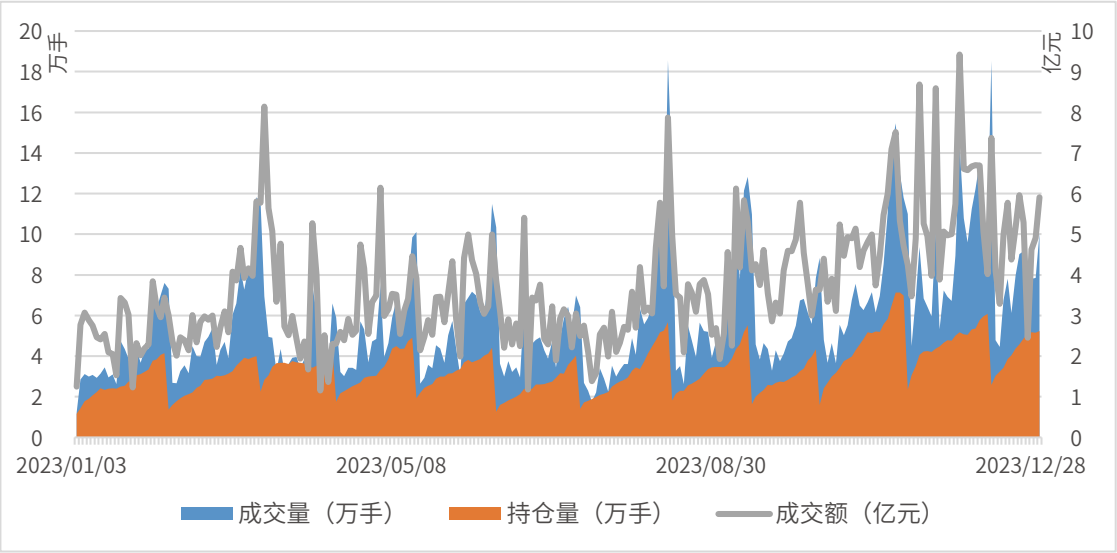
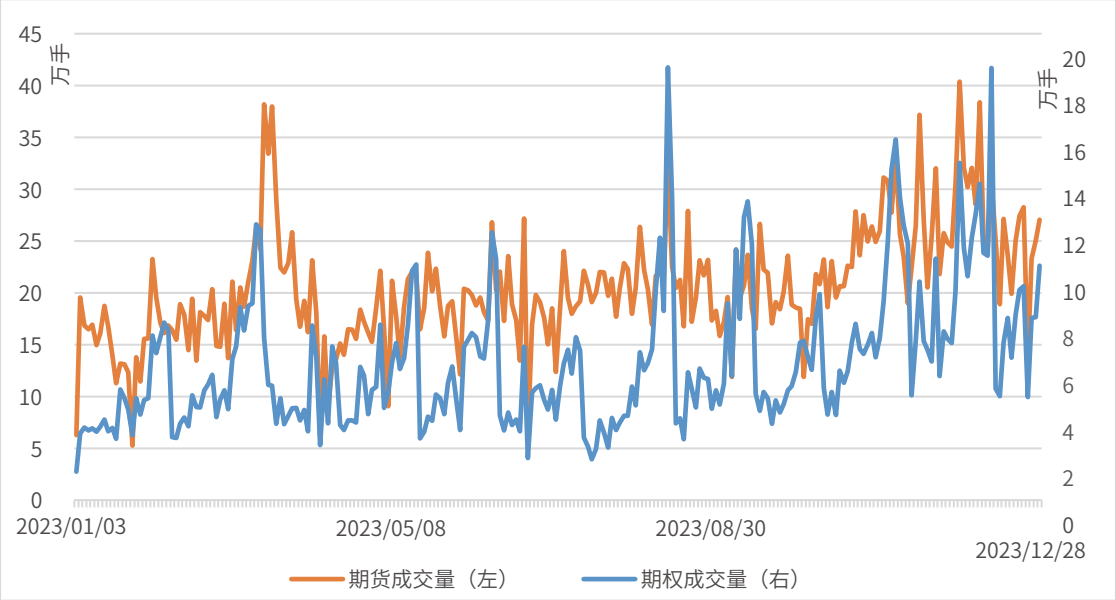


图10 2023年原油期权和标的期货成交量情况



数据来源：上海期货交易所

2023 年，原油期权累计行权 44498 手，其中，到期日行权量为 42260 手，占比 94.97%；非到期日行权 2238 手，占比 5.03%。行权总体为到期日实值期权行权转为标的期货，未发生深度虚值行权等情况，平稳有效地衔接原油期权和期货两个市场。

三、上海原油期货价格运用场景进一步扩大

（一）石油产业在政策制定时更加关注上海价格

2023 年 8 月 25 日，自然资源部 财政部发布《关于制定矿业权出让收益起始价标准的指导意见》，明确以上海原油期货价格作为油气矿产矿业权出让收益起始价标准，采用的价格为活跃月份合约月均结算价。这项改革是国家部委层面在油气市场管理中首次使用以人民币计价的上海原油期货价格。

（二）产业客户参与上海原油期货定价和套保能力有效提升

2023 年，上期能源推出“强源助企”原油期货项目，鼓励企业在现货贸易中使用上海原油期货计价。在项目的引导下，共计约 43 万吨原油现货贸易使用上海原油期货作为计价基准。上海原油期货价格运用场景进一步扩大。在使用上海原油期货进行风险管理方面，目前，产业客户除了在生产、贸易环节使用上海原油期货套保外，也有部分炼厂利用上海原油期货对裂解价差进行管理。具体思路是，用汽柴油批发价减去上海原油期货价格作为裂解价差的价格参考依据。一方面，在缺乏成品油保值工具的情况下，通过调整汽油、柴油等下游产品的生产、销售水平，实现对下游产品价格的多空管理；另一方面，在原油期货上建立反方向持仓，实现对原材料价格的多空管理。以此构建裂解价差交易，实现炼厂利润精细化管理。

（三）产业风险管理工具更加丰富

早前，上期能源发布了 3 个原油期货日中交易参考价（Marker Price，即 0:27-0:30、11:27-11:30 和 14:27-14:30 三个时段的成交量加权平均价），以及自然月份合约月均结算价和活跃月份合约月均结算价。为更好地满足实体企业采用上海原油期货结算价计价和套保的需求，2023 年 4 月起，上海原油期货结算价交易指令（TAS）申报价格范围由 0 元 / 桶扩大至 ±2 元 / 桶，交易截至时间由 10:15am 延长至 11:30am，适用合约由第一、二行合约增加至前四行合约。

历经 6 年发展，上海原油期货和期权市场运行平稳，参与主体不断丰富，生态体系日趋完善，并有效的反映了中国及亚太供需，成为国际原油市场不可或缺的有机组成部分。未来，上期能源将紧跟国际原油市场发展变化，不断优化规则制度，创新交易机制，为全球投资者管理风险提供更丰富的产品和更优质的服务。

境内外研究成果

Yang 等（2023）通过将日内数据合并为 1 秒钟间隔（5 秒钟、30 秒钟作为稳定性检验），并采用三种价格发现衡量标准来比较 SC（上海原油期货）、WTI 与 Brent 的价格发现与市场流动性各项指标。研究结果表明 INE 上海原油期货市场（以下简称 SC）在日间交易时段相较于 WTI 和 Brent，主导了价格发现；同时在市场流动性方面几乎赶上了 Brent；在 COVID-19 期间，SC 也显示出了巨大的韧性。

参考文献：Yang, Z., & Zou, M. (2023). Price leadership in China' s oil futures market: take two. Applied Economics Letters, 1-9.
https://doi.org/10.1080/13504851.2023.2208821

Naqvi 和 Mirza 等（2023）运用 GARCH 模型和信息冲击曲线对 2021 年 4 月至 2023 年 3 月的每日数据进行分析。研究表明，INE SC 的回报率在一定程度上独立于全球其他原油市场走势，且 INE SC 相比与其他原油期货，回报率显示出了更高的稳定性和对负面信息冲击的抵御能力。

参考文献：Naqvi,B.,Mirza,N.,Umar,M.,&AbbasRizvi,S.(2023). Shanghai crude oil futures: Returns Independence, volatility asymmetry, and hedging potential. Energy Economics,128,107110.
https://www.sciencedirect.com/science/article/abs/pii/S0140988323006084#preview-section-snippets

Shao 等（2023）通过多重分形分析（Multifractal Analysis）研究了新冠疫情对 SC 的短期影响。结果显示，新冠疫情爆发后，SC 的市场效率以及与其他资产的交叉相关性显著增加。这些结果可能对资产配置、投资策略和风险监测具有重要意义。

参考文献：Shao, Y. H., Liu, Y. L., & Yang, Y. H. (2023). The short-term effect of COVID-19 pandemic on China' s crude oil futures market: A study based on multifractal analysis. Fluctuation and Noise Letters, 22(04), 2340001.
https://xueshu.baidu.com/usercenter/paper/show?paperid=1j500pw04r5d0tb0y50c0t30bw786193&site=xueshu_se

Ling 等（2023）通过模型分析研究了原油市场（SC、WTI 和布伦特）与金融市场（中国期货、债券、基金、股票和外汇市场）之间的波动溢出效应和非对称交叉相关性。相比于 WTI 和布伦特，INE 原油期货市场对股票市场的影响最大。

此外，除了债券市场外，当 SC 和布伦特市场上涨时，对金融市场的风险敞口更为显著。在金融市场中，SC- 债券市场的不对称性比 WTI- 债券市场的不对称性强，但在市场有大幅波动的情况下，SC- 债券市场的不对称性弱于布伦特 - 债券市场。

参考文献：Ling, M., & Cao, G. (2023). Analysis of Risk Spillover and Asymmetry Between Three Crude Oil Markets and Chinese Financial Markets. Fluctuation and Noise Letters, 2350017.
https://xueshu.baidu.com/usercenter/paper/show?paper-id=166w0r00mf4w0m80fh1h0td0mp755195&site=xueshu_se

Yu，Yang 和 Webb（2022）用量化方法检验了 2018 年 3 月 -2022 年 3 月期间 INE SC 对 19 种亚洲原油现货价格的价格发现情况。研究表示，INE SC 对可交割和一些非可交割油种都具有价格发现能力；INE SC 对沙特的阿拉伯中质原油、科威特的科威特原油和伊朗的富鲁赞原油三种非可交割油种也具有类似于可交割油种的价格发现功能。

参考文献：Yu,Z.,Yang,J.,&Webb,R.(2022). Price Discovery in China's Crude Oil futures Markets: An Emerging Asian Benchmark? Journal of Futures Markets.
https://onlinelibrary.wiley.com/doi/full/10.1002/fut.22384

Yang 等（2021）从风险溢出角度出发，通过数个 GARCH 模型获得风险值（VaR）的连接网络。文章发现，2018 年 3 月至 2020 年 4 月期间，国际原油期货市场高度互联互通，并且 INE SC 一直是 Brent 和 WTI 原油期货的净风险接受者，尤其是在 Covid-19 爆发之后。

参考文献：Yang, Y., Ma, Y.-R., Hu, M., Zhang, D., & Ji, Q. (2021). Extreme risk spillover between Chinese and global crude oil futures. Finance Research Letters, 40, 101743–101743
https://doi.org/10.1016/j.frl.2020.101743

Li，Huang 和 Li（2021）研究了 INE SC 与 Oman 原油和 OPEC 参考的一揽子原油现货之间的价格相关性，以及 INE SC 的对冲效果。采用 GO-GARCH 模型分析 2018 年 3 月至 2019 年 6 月期间的每日价格，研究发现，相较于 WTI 和 Brent 原油期货，INE SC 与现货市场之间的价格相关性更高，且 INE 对现货的对冲有效性也更高。

参考文献：LI, J., HUANG, L., & LI, P. (2021). Are Chinese crude oil futures good hedging tools? Finance Research Letters, 38, 101514.
https://doi.org/10.1016/j.frl.2020.101514

Yi，Yang和Li（2021）重点研究了2018年3月至2020年6月期间宏观经济不确定性对INE SC的解释和预测能力。

作者使用 CARCH-MIDAS 模型解决数据频率差异的问题，发现在主要原油消费国——美国、中国和日本，以及主要原油出口国——英国、加拿大和俄罗斯的地缘政治风险、经济政策不确定性和传染病大流行等因素中，英国和日本的因素在预测 INE 原油期货波动中发挥的作用更大。

参考文献：Yi, A., Yang, M., & Li, Y. (2021). Macroeconomic Uncertainty and Crude Oil Futures Volatility–Evidence from China Crude Oil Futures Market. Frontiers in Environmental Science, 9.
https://doi.org/10.3389/fenvs.2021.636903

Lv，Yang 和 Fang（2020）研究 INE SC 与 Brent 和 WTI 原油期货相比，是否可以更好地帮助投资者对冲中国石油化工相关股票的风险。采用 2018 年至 2019 年数据以及 DCC、DECO 和 Block DECO 模型，研究发现，INE SC 在对冲风险和分散投资组合方面比 WTI 原油期货表现更好，但与 Brent 原油期货相比则不然。

参考文献：Lv, F., Yang, C., & Fang, L. (2020). Do the crude oil futures of the Shanghai International Energy Exchange improve asset allocation of Chinese petrochemical-related stocks? International Review of Financial Analysis, 71, 101537–.
https://doi.org/10.1016/j.irfa.2020.101537

上海原油期货年度之“最”

表1. 价格表现									
开盘价	最高价	最低价	收盘价	30日历史波动率（%）			期现价差（元/桶）		
				最高	最低	平均	最高	最低	平均
568.2	723.9	480.6	542.7	5.87	1.85	4.12	30.71	-49.88	-13.28

表2. 交易情况							
交易						持仓	
累计成交（万手）	累计成交额（万亿）	日均成交（万手）	日均成交额（亿）	最高成交（万手）	日盘占比(%)	日均持仓（万手）	最高持仓（万手）
4954.55	28.78	20.47	1189.34	40.39	28.29	6.51	10.11

表3. 交割								
累计交割(万桶,含期转现)	累计交割额（亿元）	交割量最大合约	单月最大交割量（万桶）	交割量最大油种	最大油种交割量（万桶）	交割量最大油库	最大油库交割量（万桶）	期转现（万桶）
4060.8	234.51	SC2308	947.6	阿曼原油	1619.4	中油大连保税	1157.8	0

2024 Development Report of Shanghai Crude Oil Futures and Options Market

In 2023, international oil prices experienced wide fluctuations due to a weak macroeconomic outlook, substantial production cuts by OPEC+ countries, and geopolitical influences on market fundamentals. In this context, the prices of Shanghai crude oil futures (product code: SC) showed a strong correlation with the prices of other international crude oil futures, while more swiftly reflecting changes in the regional spot markets. This led to noticeably increased participation from overseas traders. The Shanghai crude oil options, with rational pricing and close linkage to the crude oil futures, witnessed rapid market growth.

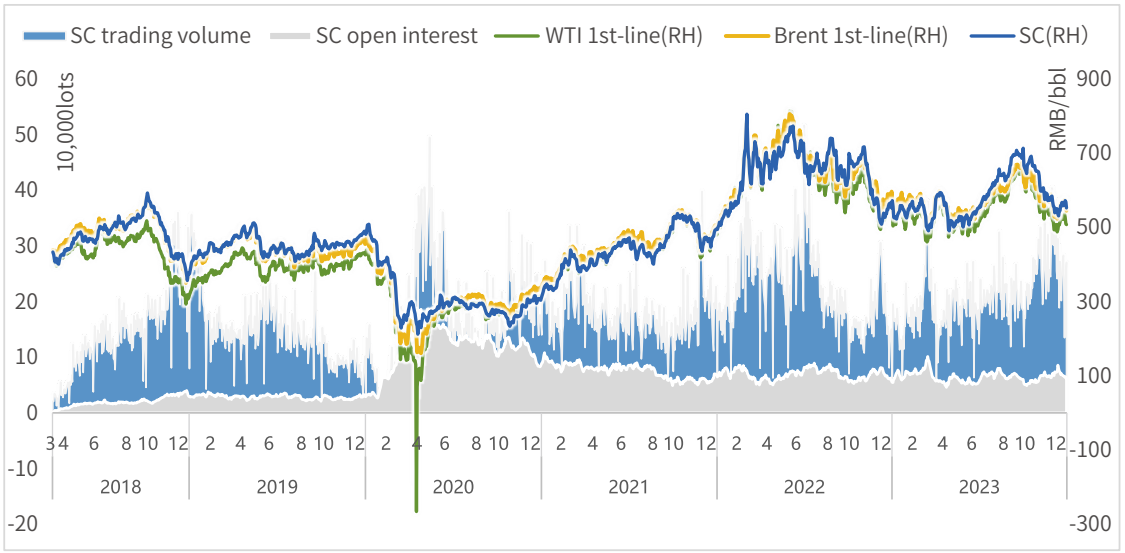
I. High price correlation with overseas markets and accurate indicator of regional spot market fundamentals

(I) International oil prices fluctuated widely

In 2023, international oil prices experienced wide fluctuations due to a weak macroeconomic outlook, substantial production cuts by OPEC+ countries, and geopolitical influences on market fundamentals. In Q1, China's growing land and air traffic spurred the recovery of crude oil demand. Nevertheless, the oil price fluctuated and plummeted to the year's low at the end of Q1 amid economic recession and financial risk concerns caused by the U.S. and Europe's continuous rate hikes and the U.S. banking sector's liquidity crisis. In Q2, OPEC+ members announced voluntary production cuts, bolstering a swift oil price rebound. However, expectations of a U.S. economic downturn led to another round of price declines. In Q3, China's introduction of an economic stimulus package and the U.S. strong GDP data soothed worries over economic recession in Europe and the U.S. The demand recovery and OPEC+ production cuts jointly boosted oil prices up to the year's high. In Q4, the oil price retreated mildly as OPEC+ ramped up exports and the peak demand season came to an end. During this period, the Israeli-Palestinian conflict and tensions in the Red Sea region supported oil prices for a short while.

As of December 29, 2023, Friday, the settlement price of the most active SC contract closed at 552.5 RMB or 77.84 USD /barrel, down by 3.41% over the year. In comparison, the settlement prices of the most active Brent and WTI contracts closed at 77.04 USD /barrel and 71.65 USD /barrel, contracting 6.16% and 6.86%, respectively. In 2023, the SC-Brent and SC-WTI correlation coefficients were respectively 0.91 and 0.93.

Figure 1: Overview of Shanghai Crude Oil Futures (SC)



Source: INE and Reuters

(II) Domestic-overseas price spread reflected different spot market fundamentals, and futures warrant quantities indicated market characteristics

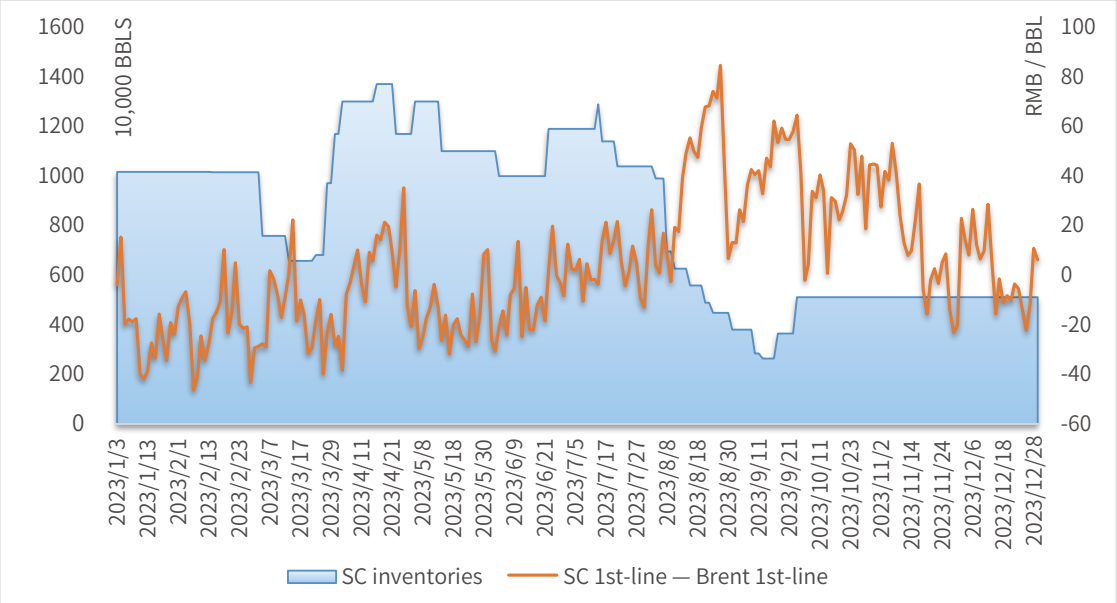
In 2023, buoyed by the recovery of domestic demand and expansion in refinery capacity, China' s crude oil processing volume surged, which in turn drove up crude oil import. The country' s apparent crude oil consumption for the year was approximately 773 million tonnes, up 8.41% year-on-year; crude oil imports amounted to 564 million tonnes, up 10.96% year-on-year. Onshore crude oil inventories saw an increase in the first half of the year and a decrease in the second half. The SC inventories accurately mirrored the changes in domestic crude oil stock and refinery utilization rate. The discount of the SC 1st-line contract against the Brent 1st-line contract subsequently declined from its highs, exhibiting a significant negative correlation with SC inventories.

In the first half of the year, under the shadow of a global macroeconomic recession forecast, the domestic refinery utilization rate dipped slightly from a high level. SC warrant inventories stayed at the year' s high and peaked in April at 13.714 million barrels. During this period, the price of the SC 1st-line contract was lower than that of the Brent 1st-line contract, with the difference bottoming at -46 RMB /barrel.

Entering Q3, as fears of a recession in Europe and the U.S. eased and China rolled out its economic stimulus package, the domestic refinery utilization rate climbed back to historical highs, and expectations for longing SC escalated. This spurred a rapid decrease in SC warrant inventories and strong SC prices. In mid-September, the inventories dropped to an annual low of 2.646 million barrels. This, together with a weak RMB against the USD, expanded the spread between the SC 1st-line contract and the Brent 1st-line contract to 74 RMB /barrel.

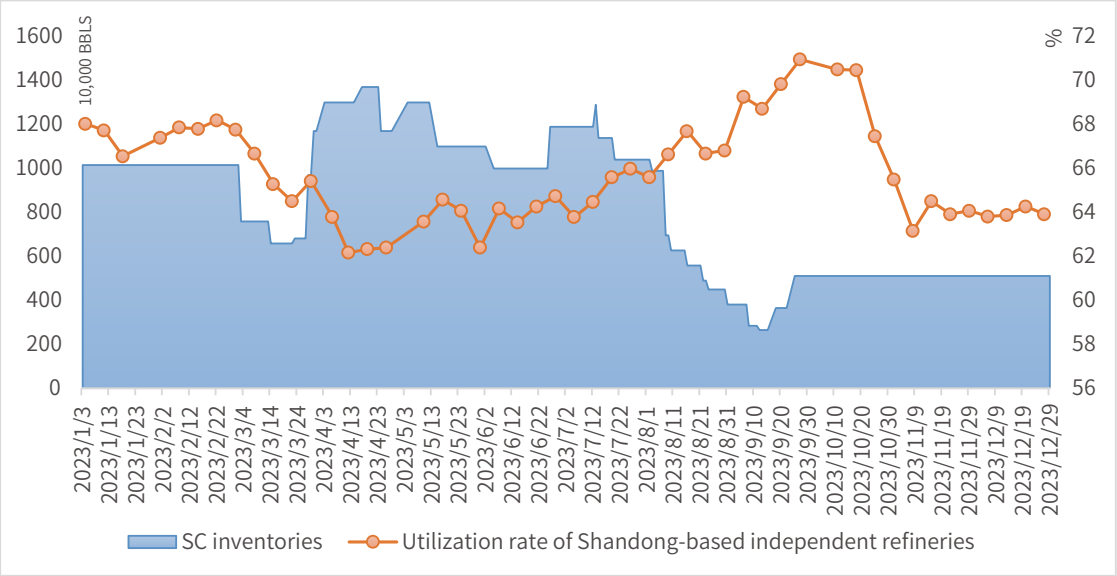
In Q4, China's refinery utilization rate slid due to the weak global macroeconomic fundamentals, a slowdown in domestic demand growth, as well as tight quotas for both refined oil exports and year-end crude oil imports. SC inventories posted a modest increment to 5.118 million barrels, while the SC-Brent spread started to tighten.

Figure 2: Domestic-Overseas Crude Oil Futures Spread and SC Inventory Changes in 2023



Source: INE and Reuters

Figure 3: Utilization Rate of Shandong-based Independent Refineries vs. SC Inventory Changes in 2023



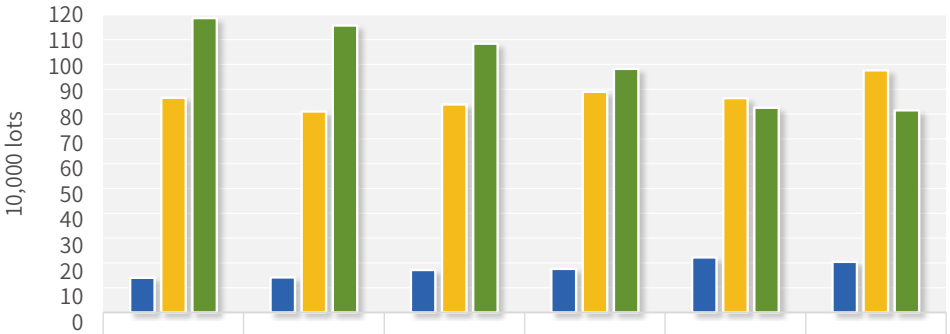
Source: INE and Reuters

II.Development of Shanghai Crude Oil Futures and Options Markets in Synergy

(I) The Shanghai crude oil futures market sustained a record-high market size, with an improving participant structure.

To effectively prevent the transmission of geopolitical risks and overseas macroeconomic downside risks, the SC margin requirement remained at a relatively high level of 15% in the first half of 2023. In addition, as oil price movement in 2023 was less volatile than in 2022, SC recorded a mild decrease in both trading volume and open interest. In 2023, the average daily trading volume stood at 204,733 lots (single-counted, the same below), a decrease of 7.53% year-on-year, and the average daily open interest was 65,147 lots, down by 6.01% year-on-year. With a cumulative turnover of RMB 28.78 trillion, SC became the product with the highest turnover in China' s futures market.

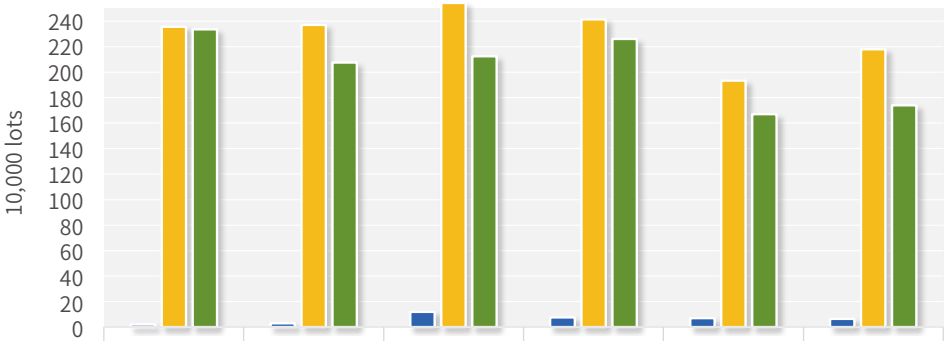
Figure 4: SC vs. Brent and WTI in Average Daily Trading Volume



	2018	2019	2020	2021	2022	2023
SC	14.03	14.20	17.11	17.55	22.14	20.47
Brent	86.57	81.03	80.94	89.03	86.49	97.70
WTI	118.70	115.72	108.35	98.20	82.55	81.47

Source: INE and Reuters

Figure 5: SC vs. Brent and WTI in Average Daily Open Interest

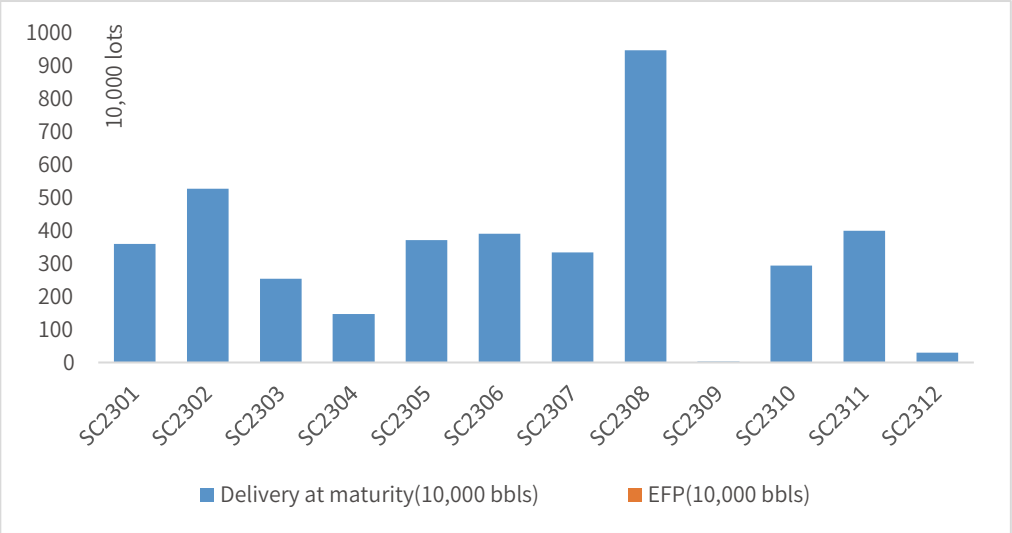


	2018	2019	2020	2021	2022	2023
SC	1.98	2.88	11.89	7.54	6.93	6.51
Brent	235.59	237.17	254.30	241.53	193.28	217.82
WTI	233.67	207.59	212.43	226.14	166.89	174.02

Source: INE and Reuters

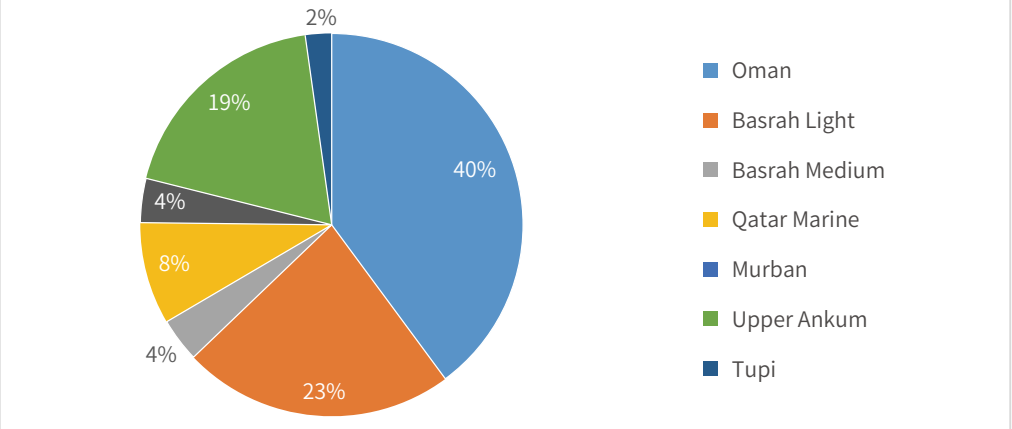
In terms of delivery, to better satisfy market needs, the Shanghai International Energy Exchange (INE) expanded the active storage capacity of Sinopec Petroleum Reserve Co., Ltd. from 400,000 to 600,000 cubic meters in June 2023. By the end of 2023, SC had a total of 17 terminals managed by 10 storage facilities. In particular, there is 1 terminal in Shanghai, 2 in Guangdong Province, 3 in Zhejiang Province, 4 in Shandong Province, 3 in Liaoning Province, 2 in Hainan Province, 1 in Hebei Province, and 1 in Guangxi Province. The approved storage capacity totaled 17.99 million cubic meters, with 12.12 million cubic meters in active use. Over the year, 40,608 lots of SC (or 40.608 million barrels) were delivered at RMB 23.451 billion. The August contract posted the largest delivery of 9,476 lots, valued at RMB 5.669 billion. Oman crude oil was the most-delivered crude stream, making up 16,194 lots or about 40% of the total delivery for the market, which is roughly equivalent to RMB 9.703 billion. In 2023, of the futures warrants that were written off, around 40% were for customs imported crude oil, 10% were for transshipment out of the country, and 50% were converted into bonded spot.

Figure 6: Delivery of SC Contracts in 2023



Source: INE

Figure 7: Crude Oil Delivery Share in 2023



Source: INE

表1 原油期货指定交割仓库及库容				
S/N	Designated Delivery Storage Warehouse	Depot	Approved Storage Capacity	Storage Capacity in Use
1	Sinopec Petroleum Reserve Co., Ltd.	SPRC Caofeidian	100	40
2		SPRC Rizhao	120	100
3		SPRC Zhoushan	80	70
4		SPRC Zhanjiang	90	60
5		SPRC Hainan	100	60
6	PetroChina Fuel Oil Company Limited	PetroChina Zhanjiang	70	50
7	Sinochem-Xingzhong Oil Staging (Zhoushan) Co., Ltd.	Sinochem-Xingzhong	100	35
8	Dalian PetroChina International Warehousing & Transportation Co., Ltd.	PetroChina Dalian Bonded	145	145
9		PetroChina Dalian Intl	180	180
10		PetroChina Guangxi Intl	20	20
11	Shandong Port Group Co., Ltd.	Qingdao Port Shihua	40	40
12		Qingdao Port Haiye	100	40
13	Yangshan Shengang International Oil Logistics Co., Ltd.	Yangshan Oil	30	20
14	Dalian North Oil Petroleum Logistics Co., Ltd.	North Petroleum	40	10
15	Hongrun Oil Storage & Transportation (Weifang) Co., Ltd.	Hongrun Oil Storage	500	300
16	Dading Petroleum Logistics Co., Ltd.	Dading Petroleum	44	22
17	SDIC Oil & Gas Terminal Yangpu Co., Ltd.	SOGTY	40	20

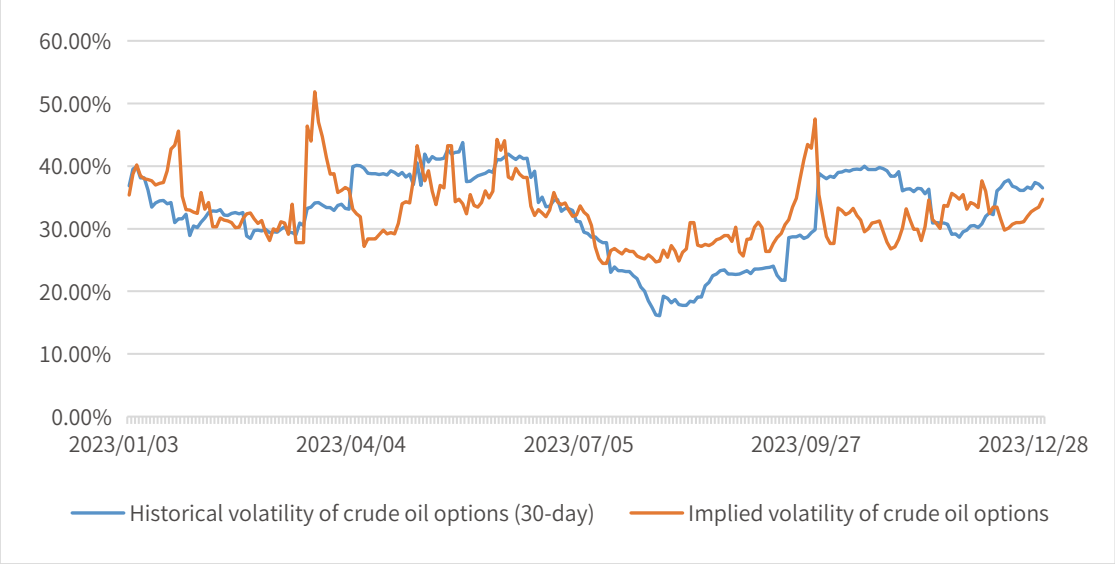
Source: INE; Unit: 10,000 cubic meters

Regarding participant structure, corporate clients contributed to over 50% of the average daily trading volume and over 70% of the average daily open interest. In terms of the trading volume, open interest, and hedging ratio by institutional investors, SC took the lead among the futures products listed in the domestic market. As to overseas traders, since the introduction of QFIs to SC trading in September 2022, they have diversified the channels to access the market, leading to a noticeable increase in their transaction share. In 2023, overseas traders represented more than 30% of both the average daily trading volume and the average daily open interest. Leading multinational oil producers, trading houses, investment banks, and fund and asset management companies all traded in the SC market. By the end of 2023, the market welcomed overseas participants from 31 countries and regions across 6 continents, as well as 2 overseas special participants and 80 overseas intermediaries.

(II) Crude oil options witnessed steady operations and rapid market expansion

In 2023, the crude oil options market operated smoothly, with reasonable pricing. The implied volatility of the active contracts stayed primarily within the 20%-40% range. This trend aligned closely with the historical volatility of the underlying futures, reliably capturing expected volatility.

Figure 8: Implied Volatility of Crude Oil Options in 2023 vs. Historical Volatility



Source: INE and Reuters

There was a tight linkage between the crude oil options and their underlying futures. When violent price fluctuations in the underlying futures market led to substantial movements in the futures trading volume, corresponding changes in the options trading volume were observed. This underscored their joint role in price risk management. In 2023, the daily average trading volume of Shanghai crude oil options stood at 59,000 lots, representing a year-on-year increase of 116.26%; the daily average open interest reached 33,900 lots, up by 55.25%; the daily average turnover amounted to RMB 371 million. The market was booming. Additionally, the transaction ratio of options to futures was 28.84%, over 16 percentage points higher than that in 2022, indicating increasing use of options for risk management. In particular, there was a notable increase in participation from corporate clients, with the transaction share of general corporate clients rising by over 6 percentage points compared to 2022. The transaction share of overseas clients also increased by about 17 percentage points, signaling higher international participation.

Figure 9: Trading Volume and Open Interest in Crude Oil Options in 2023

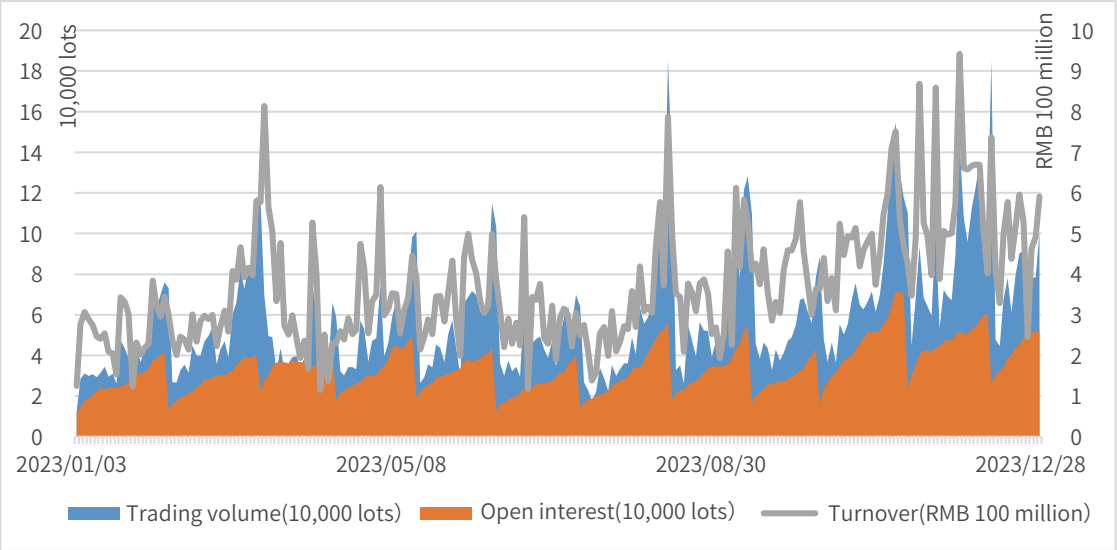
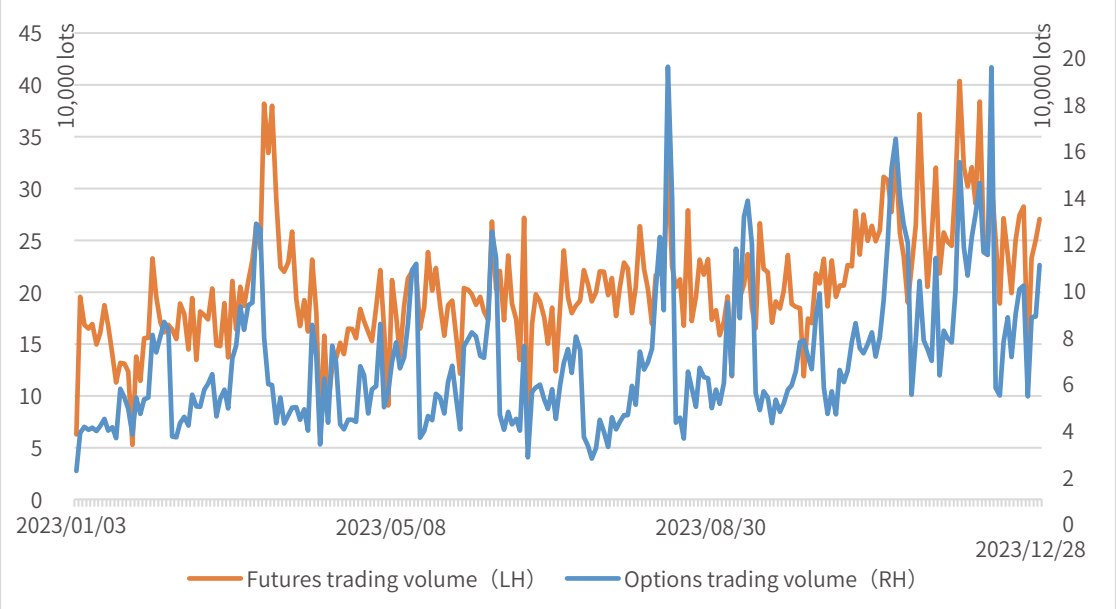


Figure 10: Trading Volume of Crude Oil Options and Futures in 2023



Source: SHFE

In 2023, a total of 44,498 lots of crude oil options contracts were exercised. Among these, 42,260 lots, or 94.97%, were exercised on their expiration date, and 2,238 lots, or 5.03%, before their expiration date. Most of the options exercised were in-the-money, converting into positions in the underlying futures upon expiration. There were no instances of deep out-of-the-money options being exercised, ensuring a smooth and effective connection between the crude oil options and futures markets.

III. Expanded Application Scenarios of Shanghai Crude Oil Futures Prices

(I) Policy making in the oil industry increasingly references Shanghai prices

On August 25, 2023, the Ministry of Natural Resources and the Ministry of Finance issued the Guiding Opinions on Setting Starting Price Standards for the Mining Rights Grant Fee, adopting the Monthly Average Settlement Price (MASP) of active SC contracts as the starting price standard for the grant fee of oil and gas mining rights. This reform marks the first use of RMB-denominated SC prices in oil and gas market regulation by state ministries.

(II) Industrial clients became more capable of pricing and hedging using SC prices

In 2023, the INE kicked off the Business Support initiative for crude oil futures, encouraging businesses to use SC prices in spot trading. Guided by the program, about 430,000 tonnes of crude oil were priced based on SC prices, thereby broadening the application scenarios of SC prices. SC was also used by industrial clients in risk management. Not only producers and traders used SC to hedge against their risks, but some refineries also employed SC to manage crack spread. To be specific, these refineries calculated the crack spread based on the wholesale prices of gasoline or diesel minus the SC prices. In the absence of hedging tools for refined oil products, the refineries adjusted their production and sales of gasoline, diesel, and other downstream products, to manage the price risks. They also manage the prices of raw materials by opening opposite positions in crude oil futures. Through such crack spread trading, they achieve precision profit management.

(III) The oil industry had a richer array of risk management tools

INE earlier released three marker prices for crude oil futures (i.e., the volume-weighted average prices during three specific periods: 0:27-0:30, 11:27-11:30, and 14:27-14:30) as well as the Monthly Average Settlement Prices (MASP) for both the calendar month and active month contracts. To better meet industrial companies' demands for pricing and hedging using SC settlement prices, INE has expanded the price quote of SC TAS orders from 0 RMB /barrel to ±2 RMB /barrel since April 2023. Meanwhile, the end of daytime trading hours for TAS has been extended from 10:15 am to 11:30 am, and eligible contracts have been expanded to include the first four lines of contracts instead of just the first two.

After six years of development, the Shanghai crude oil futures and options markets have operated smoothly, with an increasingly diverse participant base and a progressively improving ecosystem. They effectively reflect the supply-demand fundamentals in China and the Asia-Pacific regions, becoming an integral part of the international crude oil market. Looking forward, INE will keep up with the developments in the global crude oil market and constantly improve its rules and trading mechanisms, to provide global investors with a richer portfolio of products and higher-quality services for risk management.

Domestic and Overseas Studies on INE Crude Oil Futures

Yang et al. (2023) compared the price discovery, market liquidity, and other indicators among Shanghai crude oil futures (SC), WTI, and Brent, with intraday-day data consolidated into 1-second intervals (using 5-second and 30-second intervals for stability test) and three measures of price discovery. They found that SC has obtained a dominant role in price discovery relative to WTI and Brent during its day trading hours and has almost caught up with Brent in terms of market liquidity. During the COVID-19 pandemic, SC also showed great resilience.

Reference: Yang, Z., & Zou, M. (2023). Price leadership in China' s oil futures market: take two. Applied Economics Letters, 1-9.
https://doi.org/10.1080/13504851.2023.2208821

Naqvi, Mirza, et al. (2023) analyzed the daily data spanning from April 2021 to March 2023, using various GARCH models and News impact curves. The results reveal that the returns structure of INE SC is somewhat independent from global market movements, exhibiting greater stability and resilience to negative shocks than other crude oil futures.

Reference: Naqvi,B.,Mirza,N.,Umar,M.,&AbbasRizvi,S.(2023). Shanghai crude oil futures: Returns Independence, volatility asymmetry, and hedging potential. Energy Economics,128,107110.
https://www.sciencedirect.com/science/article/abs/pii/S0140988323006084#preview-section-snippets

Shao et al. (2023) studied the short-term influence of COVID-19 pandemic on SC via multifractal analysis. They found that market efficiency of SC and its cross-correlations with other assets increase significantly after the outbreak of COVID-19. These results may have important implications for assets allocation, investment strategies, and risk monitoring.

Reference: Shao, Y. H., Liu, Y. L., & Yang, Y. H. (2023). The short-term effect of COVID-19 pandemic on China' s crude oil futures market: A study based on multifractal analysis. Fluctuation and Noise Letters, 22(04), 2340001. https://xueshu.baidu.com/usercenter/paper/-show?paperid=1j500pw04r5d0tb0y50c0t30bw786193&site=xueshu_se

Ling et al. (2023) conducted a series of model-based analyses to explore the volatility spillover effect and the asymmetric cross-correlation between three crude oil markets (INE, WTI, and Brent) and five financial markets (the Chinese futures, bond, fund, stock, and foreign exchange markets). In particular, the impact of the INE SC market on the stock market is greatest, especially with respect to the Brent and WTI. Except for the bond market, when the SC and Brent markets are increasing, the risk exposure to financial markets is more significant. Among financial markets, SC-Bond market asymmetry is stronger than WTI-bond market asymmetry, but weaker than that of the Brent-Bond market when there are large fluctuations.

Reference: Ling, M., & Cao, G. (2023). Analysis of Risk Spillover and Asymmetry Between Three Crude Oil Markets and Chinese Financial Markets. Fluctuation and Noise Letters, 2350017.
https://xueshu.baidu.com/usercenter/paper/show?paperid=166w0r00mf4w0m80fh1h0td0mp755195&site=xueshu_se

Yu, Yang, and Webb examined the price discovery performance of INE SC for the spot prices of 19 types of Asian crude oil from March 2018 to March 2022 using a quantitative approach. The study showed evidence of the price discovery function of INE SC for deliverable and some non-deliverable crudes. INE SC performs price discovery function for Saudi Arabian Medium crude, Kuwait crude, and Iran' s Forozan crude in the way similar to other deliverable crudes.

Reference: Yu, Z., Yang, J., & Webb, R. (2022). Price Discovery in China' s Crude Oil Futures Markets: An Emerging Asian Benchmark? Journal of Futures Markets.
https://onlinelibrary.wiley.com/doi/full/10.1002/fut.22384

Yang et al. (2021) built several GARCH models to obtain the value at risk (VaR) connectedness networks. They found that, between March 2018 and April 2020, the international oil markets were highly connected, with the INE SC persistently acting as a net receiver of the risks from Brent and WTI, especially following the Covid-19 outbreak.

Reference: Yang, Y., Ma, Y.-R., Hu, M., Zhang, D., & Ji, Q. (2021). Extreme risk spillover between Chinese and global crude oil futures. Finance Research Letters, 40, 101743-101743.
https://doi.org/10.1016/j.frl.2020.101743

Li, Huang, and Li (2021) investigated the price correlations between the INE SC and the spot prices of Oman and the OPEC Basket, as well as the hedging effectiveness of the INE SC. They analyzed the intraday prices from March 2018 to June 2019 with a GO-GARCH model and found that compared with WTI and Brent crude futures, INE SC showed higher price correlation with the spot markets and was a more effective hedging tool.

Reference: Li, J., Huang, L., & Li, P. (2021). Are Chinese crude oil futures good hedging tools? Finance Research Letters, 38, 101514-.
https://doi.org/10.1016/j.frl.2020.101514

Yi, Yang, and Li (2021) investigated whether the macroeconomic uncertainty factors can explain and forecast the INE SC' s volatility for the period from March 2018 to June 2020. The authors used the GARCH-MIDAS model to address the differences in data frequency and found that among the major oil consumers (the United States, China, and Japan) and the major oil exporters (the United Kingdom, Canada, and Russia), the geopolitical risk, economic policy uncertainty, and pandemics situation in the United Kingdom and Japan had greater predictive power for the volatility of the INE SC.

Reference: Yi, A., Yang, M., & Li, Y. (2021). Macroeconomic Uncertainty and Crude Oil Futures Volatility-Evidence from China Crude Oil Futures Market. Frontiers in Environmental Science, 9.
https://doi.org/10.3389/fenvs.2021.636903

Lv, Yang, and Fang (2020) looked at whether investors can better hedge against the risks of Chinese petrochemical stocks with the INE SC compared with the Brent and WTI crude futures. By constructing the DCC, DECO, and Block DECO models based on the data from 2018 to 2019, they found that the INE SC provided superior hedging and portfolio diversification results versus WTI, but inferior results versus Brent.

Reference: Lv, F., Yang, C., & Fang, L. (2020). Do the crude oil futures of the Shanghai International Energy Exchange improve asset allocation of Chinese petrochemical-related stocks? International Review of Financial Analysis, 71, 101537-.
https://doi.org/10.1016/j.irfa.2020.101537

2023 Figures of Shanghai Crude Oil Futures

Table 1: Price Performance (Active Contracts)									
Opening Price	Highest Price	Lowest Price	Closing Price	30-Day Volatility (%)			Basis (¥/barrel)		
				Highest	Lowest	Average	Highest	Lowest	Average
568.2	723.9	480.6	542.7	5.87	1.85	4.12	30.71	-49.88	-13.28

Table 2: Trading							
Trading						Open Interest	
Cumulative trading volume (10,000 lots)	Cumulative turnover (RMB trillion)	Average daily volume (10,000 lots)	Average daily turnover (RMB 100 million)	Highest daily volume (10,000 lots)	Proportion of trading volume in the daytime trading session (%)	Average daily open interest (10,000 lots)	Highest daily open interest (10,000 lots)
4,954.55	28.78	20.47	1,189.34	40.39	28.29	6.51	10.11

Table 3: Delivery								
Cumulative delivery quantity (10,000 bbl, including EFPs)	Cumulative delivery amount (RMB 100 million)	Contract with the highest delivery quantity	Highest monthly delivery quantity (10,000 bbl)	Most delivered Crude Stream	Delivery volume of the most delivered crude stream (10,000 bbl)	Storage facility with the highest delivery quantity	Highest delivery quantity by storage facility (10,000 bbl)	EFP volume (10,000 bbl)
4,060.8	234.51	SC2308	947.6	Oman	1,619.4	PetroChina Dalian Bonded	1,157.8	0

03

Crude Oil Futures Awards

原油期货获奖名单

2023年原油期货
交易量排名前二十会员名单

华泰期货有限公司	中信建投期货有限公司
东证期货有限公司	浙商期货有限公司
中信期货有限公司	方正中期期货有限公司
国泰君安有限公司	广发期货有限公司
中泰期货股份有限公司	华闻期货有限公司
国信期货有限责任公司	申银万国期货有限公司
银河期货有限公司	东吴期货有限公司
海通期货股份有限公司	光大期货有限公司
徽商期货有限公司	华安期货有限公司
新湖期货股份有限公司	国投安信期货有限公司

Top 20 Members by Crude Oil Futures Trading Volume in 2023

Huatai Futures Co., Ltd.	China Futures Co., Ltd.
Orient Futures Co., Ltd.	Zheshang Futures Co., Ltd.
CITIC Futures Co., Ltd.	Founder CIFCO Futures Co., Ltd.
Guotai Junan Co., Ltd.	GF Futures Co., Ltd.
Zhongtai Futures Co., Ltd.	Huawen Futures Co., Ltd.
Guoxin Futures Co., Ltd.	Shenyin & Wanguo Futures Co., Ltd.
Galaxy Futures Co., Ltd.	Soochow Futures Co., Ltd.
Haitong Futures Co., Ltd.	Everbright Futures Co., Ltd.
Huishang Futures Co., Ltd.	Huaan Futures Co., Ltd.
Xinhu Futures Co., Ltd.	SDIC Essence Futures Co., Ltd.

2023年原油期货
交易量排名前二十境外中介机构名单

Orient Futures International (Singapore) Pte. Ltd.

Bright Point International Financial (SG) Pte.Ltd.

Goldman Sachs International

J.P. Morgan Securities plc

Straits Financial Services Pte. Ltd.

亮点国际期货有限公司

群益期货(香港)有限公司

StoneX Financial Pte. Ltd.

横华国际期货有限公司

KGI Securities (Singapore) Pte.Ltd.

中国新永安期货有限公司

ABN AMRO Clearing Bank N.V.

Phillip Nova Pte.Ltd.

Macquarie Futures (Singapore) Pte.Ltd.

BNP Paribas

DBS Bank Ltd.

Societe Generale International Limited

Deutsche Bank AG

ADMIS Singapore Pte. Limited

中信期货国际有限公司

Top 20 Overseas Intermediaries by Crude Oil Futures Trading Volume in 2023

Orient Futures International (Singapore) Pte. Ltd.

Bright Point International Financial (SG) Pte. Ltd.

Goldman Sachs International

J.P. Morgan Securities plc

Straits Financial Services Pte. Ltd.

Bright Point International Futures Limited

Capital CSC Futures (HK) Limited

StoneX Financial Pte. Ltd.

HGNH International Futures Co., Ltd.

KGI Securities (Singapore) Pte. Ltd.

China Xin Yongan Futures Co., Ltd.

ABN AMRO Clearing Bank N.V.

Phillip Nova Pte. Ltd.

Macquarie Futures (Singapore) Pte. Ltd.

BNP Paribas

DBS Bank Ltd.

Societe Generale International Limited

Deutsche Bank AG

ADMIS Singapore Pte. Limited

CITIC Futures International Co., Ltd.

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