



2024年 第28周市场周报

Contents

第一部分

航运安全 SHIPPING SAFETY

第二部分

航运数据 SHIPPING DATA

第三部分

航运市场 SHIPPING MARKET

第四部分

运力分布 SUPPLY DISTRIBUTION

第五部分

远期运价协议 FFA

第六部分

燃油价格 BUNKER PRICE

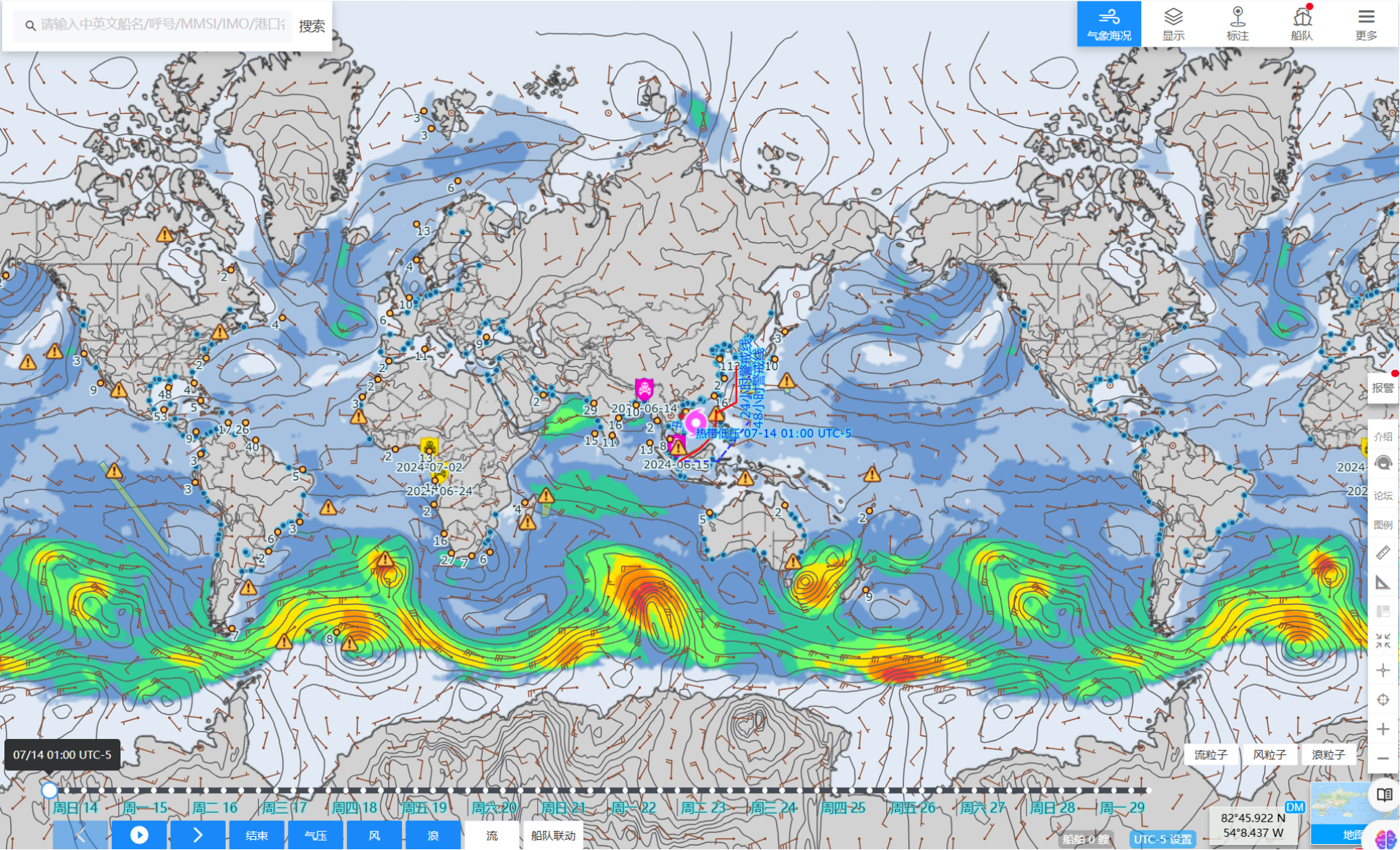
第七部分

最新商品价格 LATEST COMMODITIES PRICE

第八部分

本周话题 WEEKLY TOPIC

第一部分 航运安全 SHIPPING SAFETY



航行警告 Navigation Warning

HiFleet显示全球目前有效的航行警告有807个，东南亚和环加勒比海居多，请相关水域船舶注意航行警告内容。There are currently 807 navigational warnings in effect around the ocean on hiFleet with the South East and around the coastal of Caribbean Sea still being the majority. Please pay attention to the navigational warnings in relevant waters.

航海气象 Meteorology

未来一周中国渤海海域风力维持3-4级，相关海域1米轻浪；黄海风力增强到6-7级，相关海域有时大浪；东海风力维持5-6级，相关海域有时中浪；台湾海峡风力有时5级，台湾海峡海浪可能有2米中浪；南海大部海域风力维持在4-5级，中浪。大西洋和太平洋当前时有发展，有个热带低压在越南东部，可能于7月15日在其附近登陆。The coming week the wind in Bohai Sea stays moderate breeze with slight seas. Yellow Sea strengthens to near gale with rough sea sometimes. And China East Sea might stay strong breeze with rough seas. The wind in the Taiwan Strait will experience fresh breeze and the sea there happens to experience moderate. In most of the South China Sea the wind stays fresh breeze with moderate seas. There are low-pressures developing occasionally in the North of the Atlantic and Pacific Ocean and one tropic low pressure is moving toward to east of Vietnam which might be landing on about early of 15th July.

海盗事件 Piracy

2024年7月2日，加蓬奥文多锚地。三名未经授权的人乘坐快艇登上了停泊的液化石油气轮船。警觉的船员注意到了这些人并发出了警报，呼叫了港口控制。听到警报后，这些人乘坐快艇逃走了。加蓬海军及时回应并搜查了油轮，未发现未经授权的人员。02:07:2024: 2325 UTC: Posn: 00:17.68N – 009:25.30E, Owendo Anchorage, Gabon. Three unauthorized persons in a speed boat boarded an anchored LPG Tanker. Alert crew noticed the persons and raised the alarm, called the port control and secured themselves in the accommodation. Hearing the alarm, the persons escaped in their speed boat. Gabon navy responded in a timely manner and made searched the tanker. No unauthorized persons found.

海上事件 Marine Incidents

HiFleet船舶数据显示，一艘13,800吨的Ultra Galaxy（建于2008年）多用途船舶在距离Doringbaai西部60海里出现危险倾斜，在当地时间7月8早晨被船员遗弃。According to HiFleet ship data, a 13,800-ton Ultra Galaxy (built in 2008) multipurpose vessel was reported to be dangerously tilting approximately 60 nautical miles west of Doringbaai on the morning of July 8th. The crew abandoned the ship.

其它 Others

没有 Nil

备注 Remark

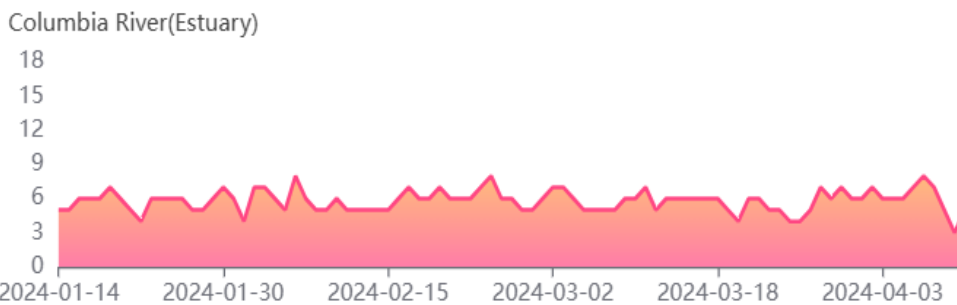
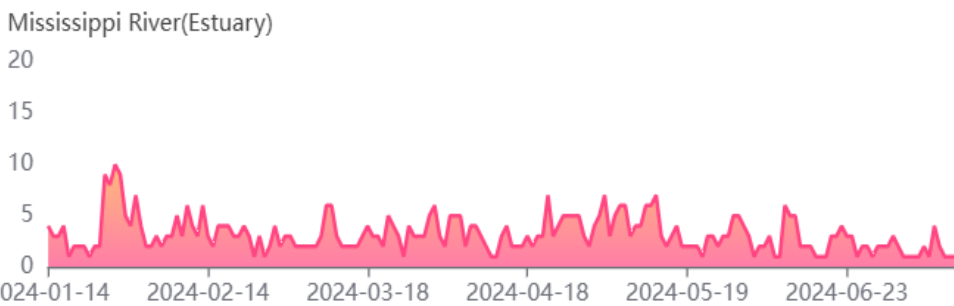
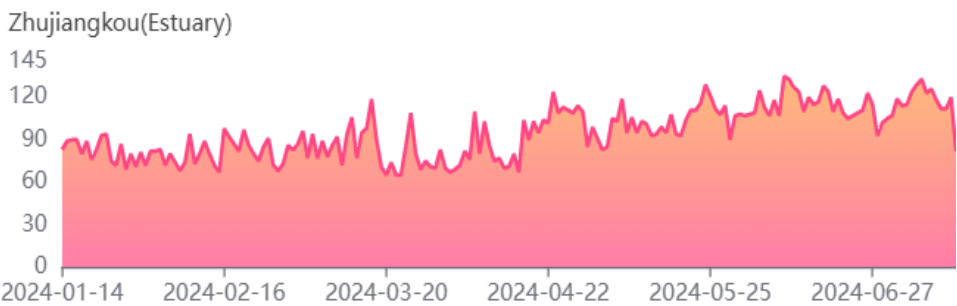
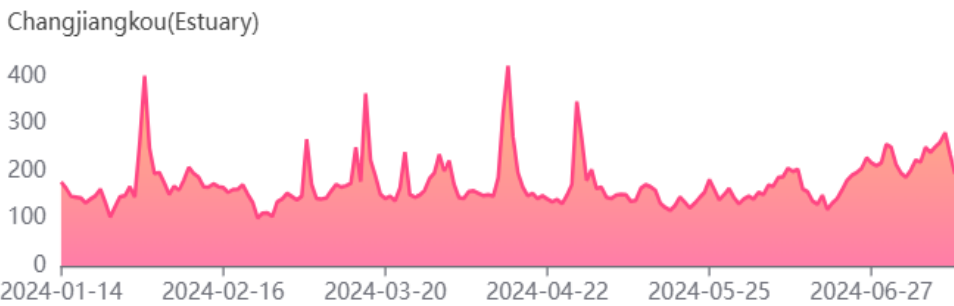
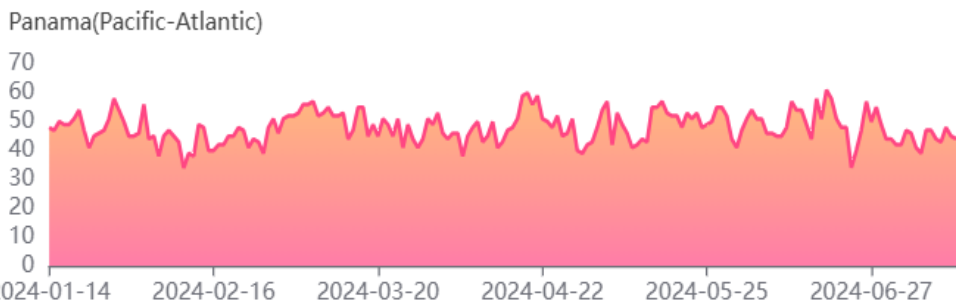
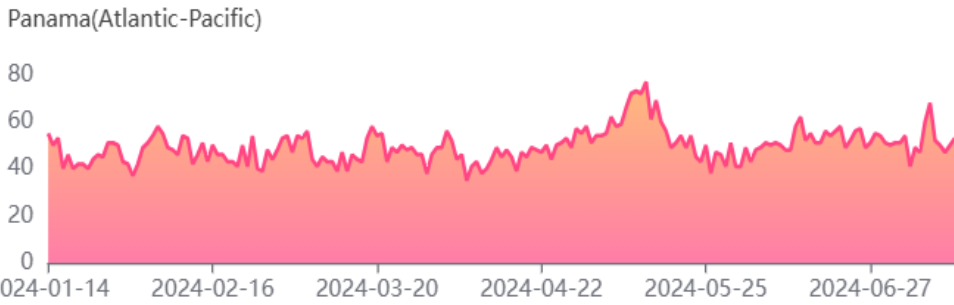
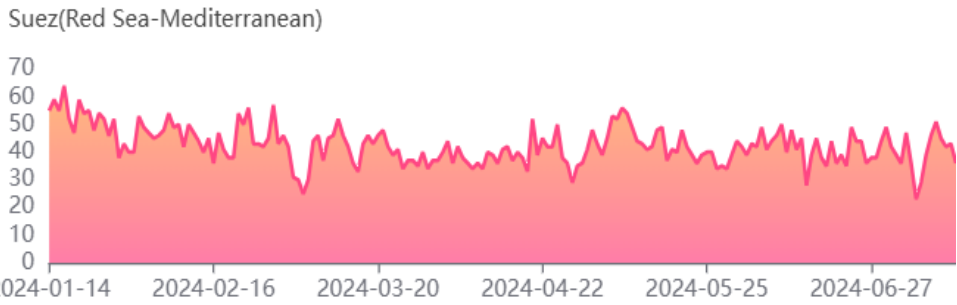
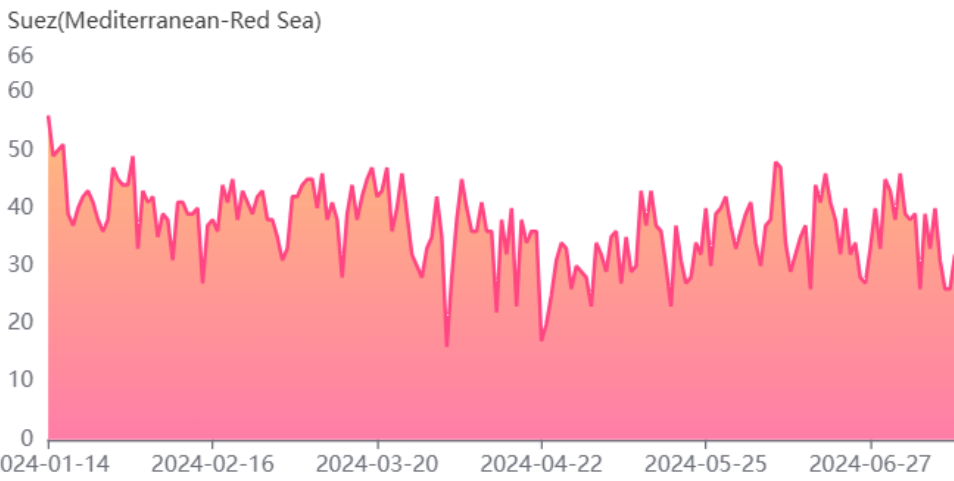
本报告数据截止时间为2024年7月14日北京时间17点；所有数据和或观点仅供参考，在任何情况下本公司及其员工不承担任何风险。The data deadline for this report is Beijing time 17 hours on Jul 14th of 2024; All data and/or opinions are for reference only and under no circumstances do the Company and its employees assume any risk.

第二部分 航运数据 SHIPPING DATA

最近一周船舶运河/河口锚地等待数量

Latest Week Update Vessel Waiting Numbers Information in Anchorages of Canals and Rivers

Canal/Riv.	P.N.	M.N.	WoW	MoM
Suez.Red	36	1168	30	-24
Miss.Riv.	1	52	0	-19
CJK	194	5938	184	1396
Pa.Atlan.	53	1523	33	107
Colum.Riv.	6	143	11	26
Suez.Med.	32	1050	-61	13
Pa.Pac.	44	1370	12	-81
ZJK	82	3311	-20	12

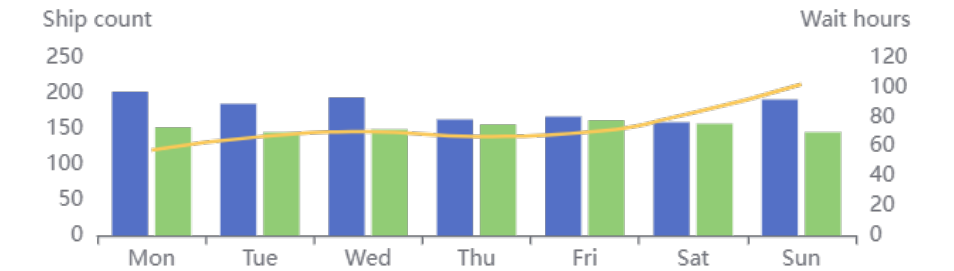
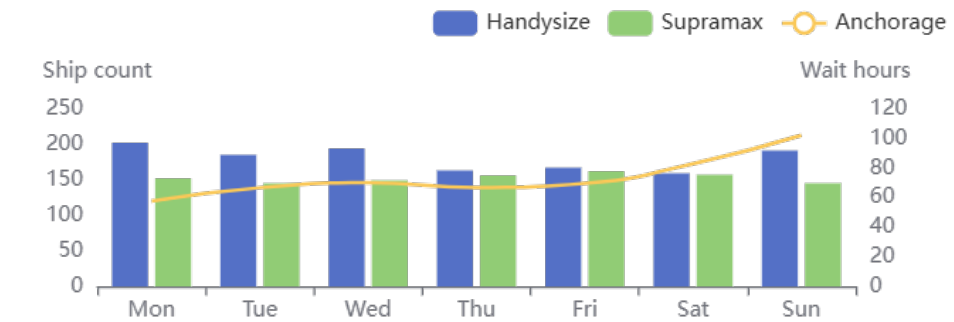


(P.N-Present Number; M.N.-Month Number; WoW-Week on Week; MoM-Month on Month)

最近一周中国区域超大灵便型散货船和灵便型散货船舶锚泊数量和平均锚泊时长

Latest Week Update for Supra and Handy Num. and Waiting Time Information in Anchorages of China

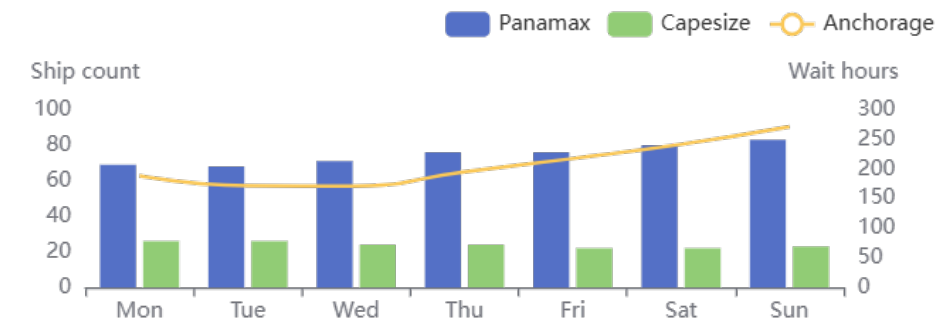
Type	M	T	W	Th	F	Sat	Sun
HDY	202	185	194	163	167	159	191
SMX	152	145	149	156	162	157	145
WT.h.	57.7	66.6	70	66.8	69.5	82.8	102



最近一周巴西区域好望角型和巴拿马型散货船舶锚泊数量和平均锚泊时长

Latest Week Update for Capesize and Panamax Num. and Waiting Time Information in Anchorages of Brazil

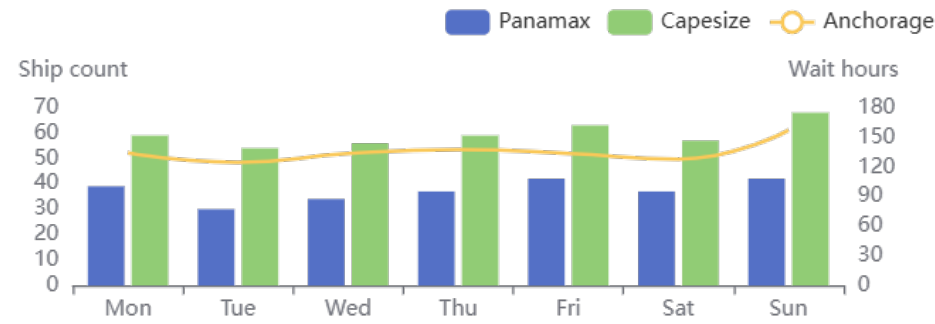
Type	M	T	W	Th	F	Sat	Sun
Pan.	69	68	71	76	76	80	83
Cap	26	26	24	24	22	22	23
WT.h.	188.5	171.5	171.2	195.2	217.5	241.5	271



最近一周澳大利亚区域好望角型和巴拿马型散货船舶锚泊数量和平均锚泊时长

Latest Week Update for Capesize and Panamax Num. and Waiting Time Information in Anchorages of Australia

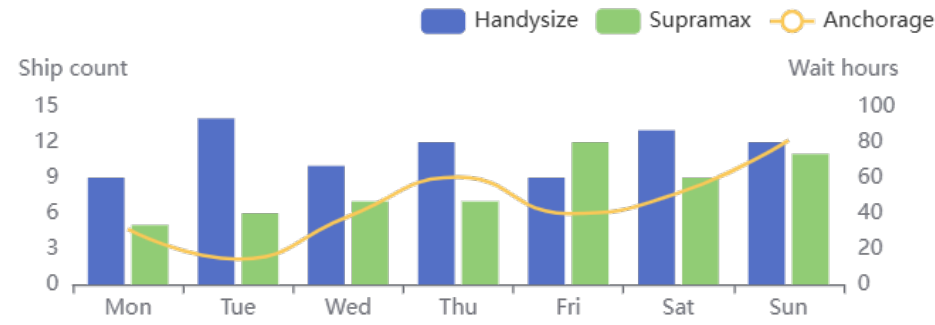
Type	M	T	W	Th	F	Sat	Sun
Pan.	39	30	34	37	42	37	42
Cap	59	54	56	59	63	57	68
WT.h.	134.2	124.6	133.6	137.5	133.7	127.8	157



最近一周黑海区域超大灵便型散货船和灵便型散货船舶锚泊数量和平均锚泊时长

Latest Week Update for Supra & Handy Num. and Waiting Time Information in Anchorages of Black Sea

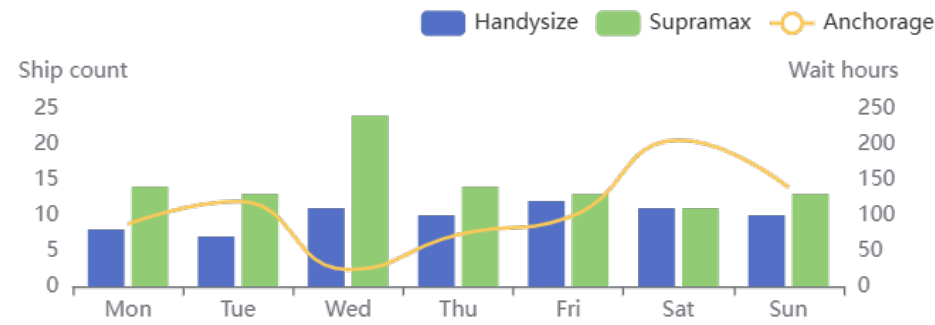
Type	M	T	W	Th	F	Sat	Sun
HDY	9	14	10	12	9	13	12
SMX	5	6	7	7	12	9	11
WT.h.	31.15	14.2	38.2	60.4	39.9	51.5	81



最近一周美湾区域超大灵便型散货船和灵便型散货船舶锚泊数量和平均锚泊时长

Latest Week Update for Supra and Handy Num. and Waiting Time Information in Anchorages of US Gulf

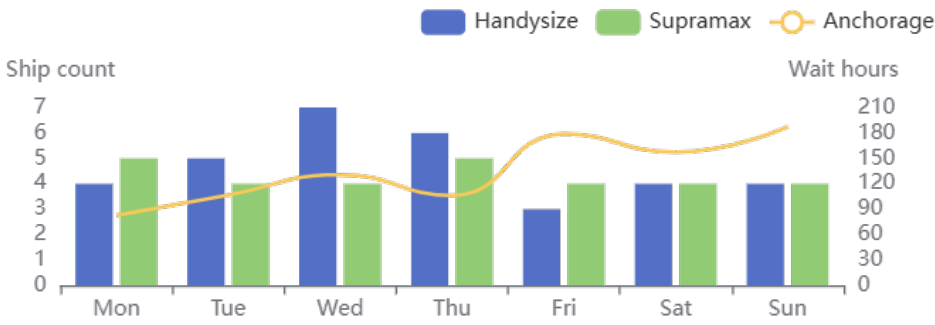
Type	M	T	W	Th	F	Sat	Sun
HDY	8	7	11	10	12	11	10
SMX	14	13	24	14	13	11	13
WT.h.	87.6	119.7	23.7	72.9	96.9	205.65	139



最近一周拉普拉特河区域超大型散货船和灵便型散货船舶锚泊数量和平均锚泊时长

Latest Week Update for Supra and Handy Num. and Waiting Time Information in Anchorages of Plate River

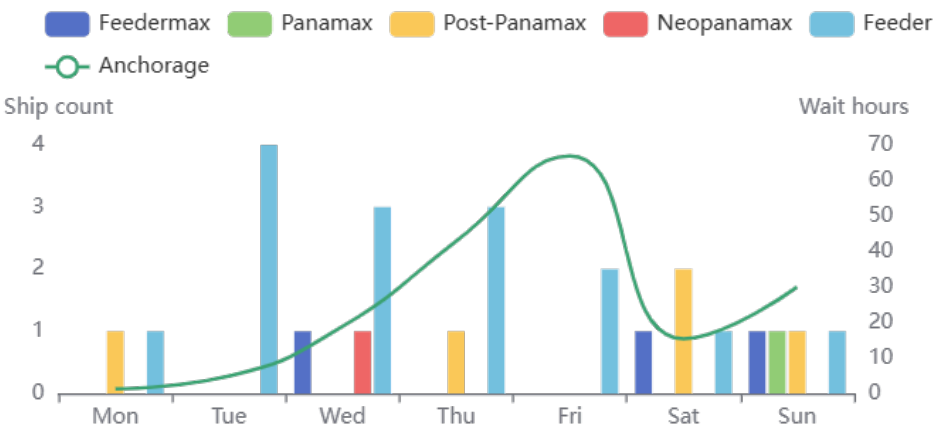
Type	M	T	W	Th	F	Sat	Sun
HDY	4	5	7	6	3	4	4
SMX	5	4	4	5	4	4	4
WT.h.	82.8	106.8	130.8	106.3	178.8	157.4	187.5



最近一周香港区域集装箱船锚泊数量和平均等待时长

Latest Week Update for Container Vessels Num. and Waiting Time Information on Anchorages of HongKong

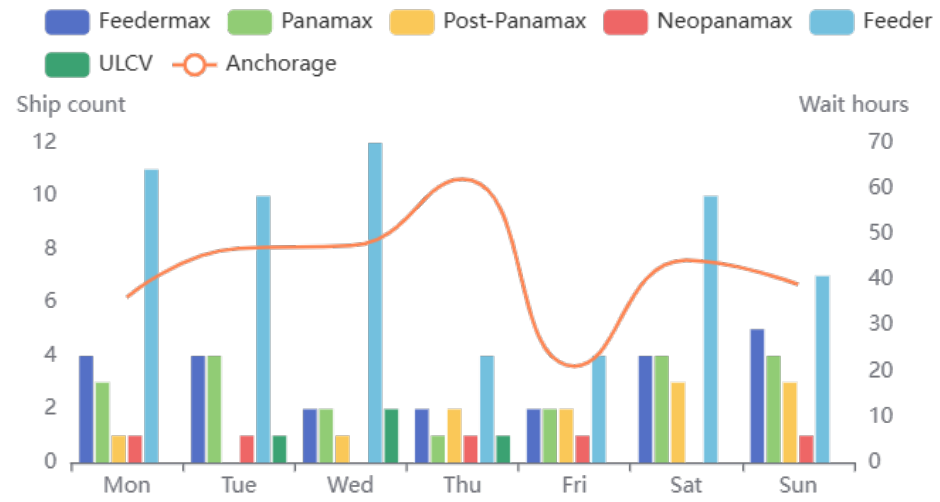
Type	M	T	W	Th	F	Sat	Sun
F.ma.	0	0	1	0	0	1	1
Pan.	0	0	0	0	0	0	1
PPx	1	0	0	1	0	2	1
NPx	0	0	1	0	0	0	0
Fd	1	4	3	3	2	1	1
WT.h.	1.3	4.9	18.9	42.9	66.9	15.4	30
Ulcw	0	0	0	0	0	0	0



最近一周上海区域集装箱船锚泊数量和平均等待时长

Latest Week Update for Container Vessels Num. and Waiting Time Information in Anchorages of Shanghai

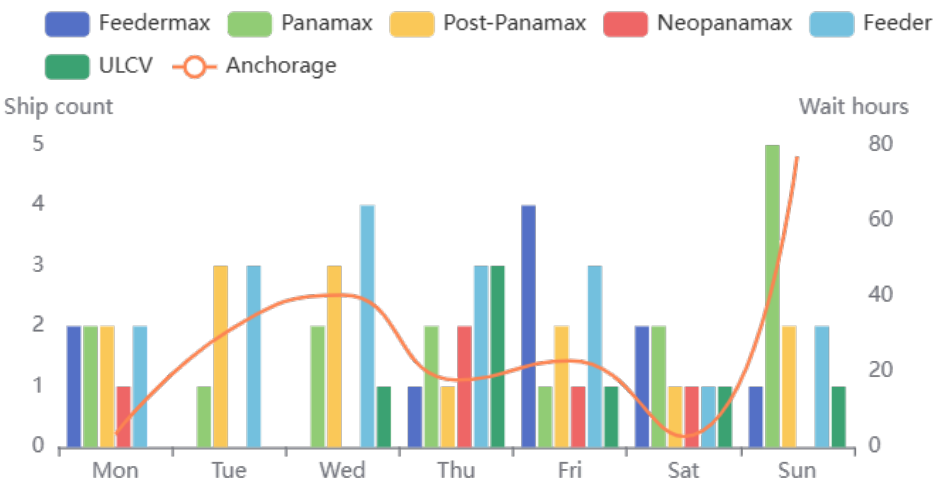
Type	M	T	W	Th	F	Sat	Sun
F.ma.	4	4	2	2	2	4	5
Pan.	3	4	2	1	2	4	4
PPx	1	0	1	2	2	3	3
NPx	1	1	0	1	1	0	1
Fd	11	10	12	4	4	10	7
Ulcw	0	1	2	1	0	0	0
WT.h.	36.2	46.9	47.5	62.1	21.1	44.3	39



最近一周新加坡区域集装箱船锚泊数量和平均锚泊时长

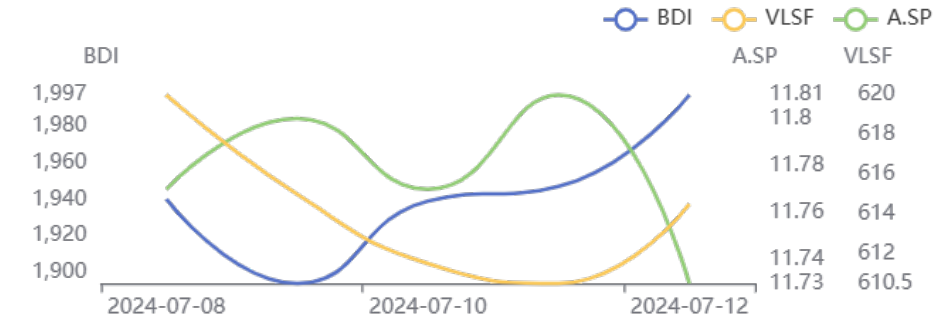
Latest Week Update for Container Vessels Num. and Waiting Time Information in Anchorages of Singapore

Type	M	T	W	Th	F	Sat	Sun
F.ma.	2	0	0	1	4	2	1
Pan.	2	1	2	2	1	2	5
PPx	2	3	3	1	2	1	2
NPx	1	0	0	2	1	1	0
Fd	2	3	4	3	3	1	2
Ulcw	0	0	1	3	1	1	1
WT.h.	3.4	30.9	40.3	17.8	22.9	2.85	77



最近一周空载散货船平均航速Latest Weekly Average Speed for Bulkers during Ballast Voyage

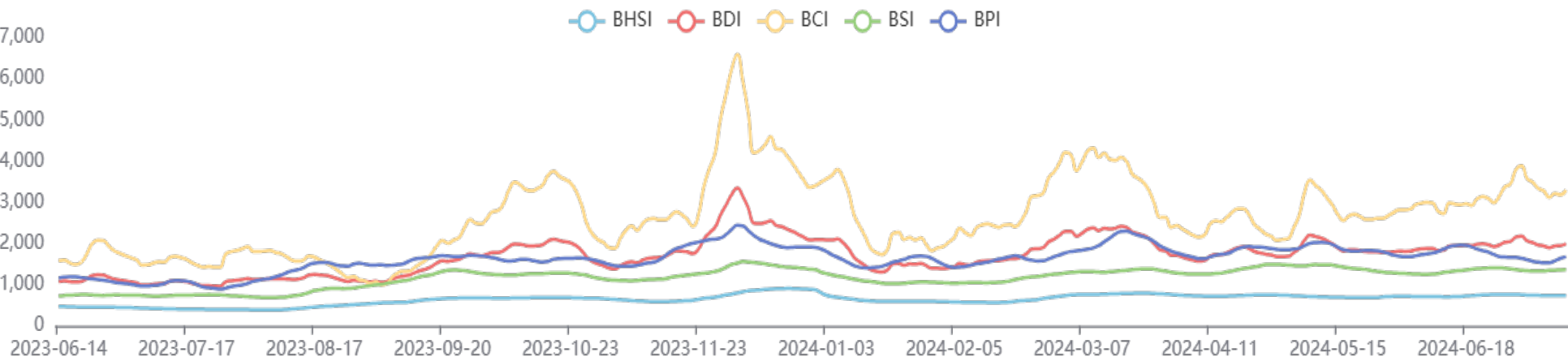
Type	M	T	W	Th	F	Sat	Sun
BDI	1531	1536	1579	1638	1678		
VLSF	620.00	615.00	611.50	610.50	614.50		
A.SP	11.77	11.8	11.77	11.81	11.73	11.76	



第三部分 航运市场 SHIPPING MARKET

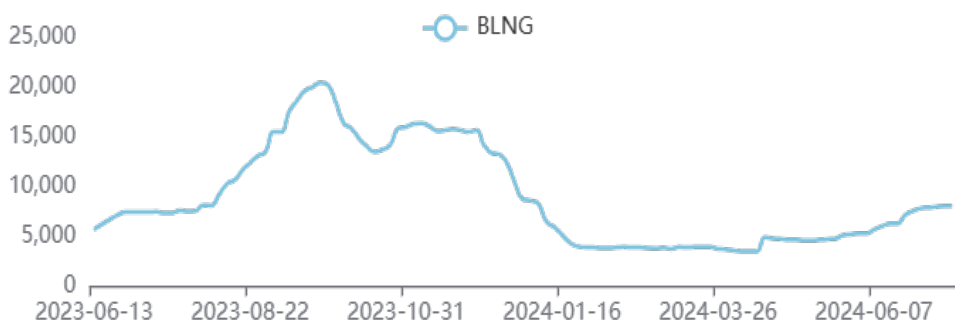
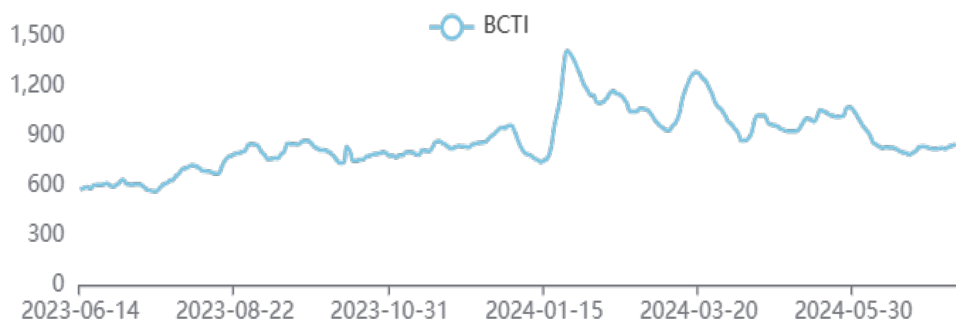
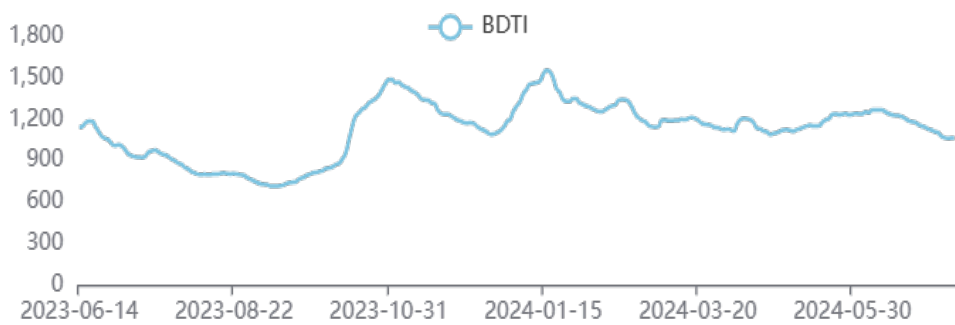
波罗的海干散货指数Baltic Dry Index

Type	PI	WoW	W%	M%	y%
BDI	1997	31.0	1.58	2.52	83.55
BCI	3296	-43.0	-1.29	11.46	97.96
BPI	1678	132.0	8.54	-13.95	54.51
BSI	1364	29.0	2.17	2.17	85.83
BHSI	741	-1.0	-0.13	4.22	78.99



能源运价指数Energy Shipping Index

Type	PI	WoW	W%	M%	y%
BDTI	1064	-38.0	-3.45	-14.19	15.53
BCTI	849	27.0	3.28	2.54	42.93
BLNG	8030	76.0	0.96	28.34	9.7
BLPG	3694	-880.0	-19.24	-30.73	-64.91



第四部分 运力分布 SUPPLY DISTRIBUTION

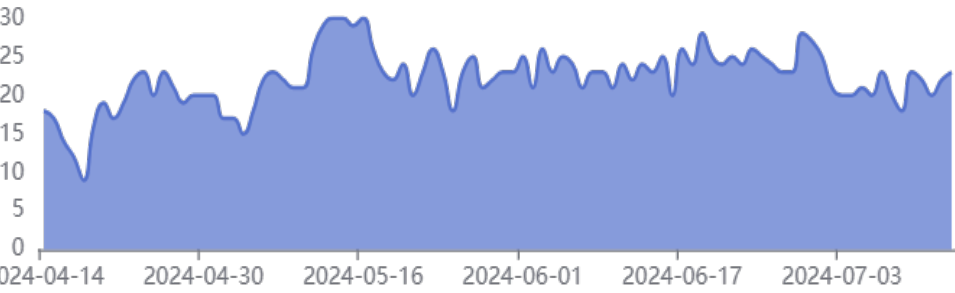


好望角型散货船 Capesize

区域：巴西，最近一周好望角型散货船准备装货船舶数量

Area: Brazil, The latest week update number for Capesize with cargo loading intention.

Type	M	T	W	Th	F	Sat	Sun
Cape	20	18	23	22	20	22	23



区域：南非，最近一周好望角型散货船准备装货船舶数量

Area: South Africa, The latest week update number for Capesize with cargo loading intention.

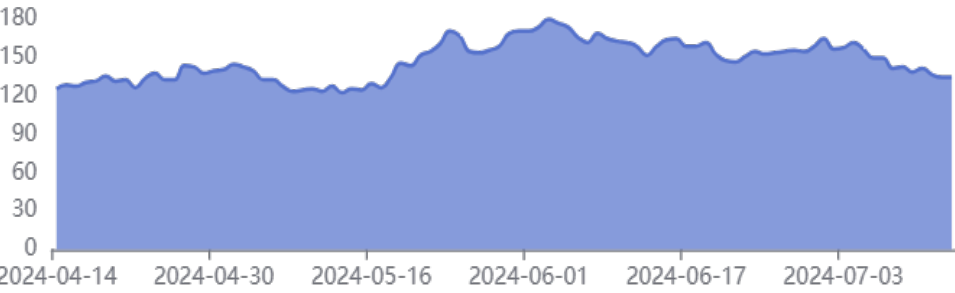
Type	M	T	W	Th	F	Sat	Sun
Cape	24	23	25	29	31	37	36

巴拿马型散货船 PANAMAX

区域：南美北部和东部。最近一周巴拿马型散货船准备装货船舶数量。

Area: South America. The latest week update number for Panamax with cargo loading intention.

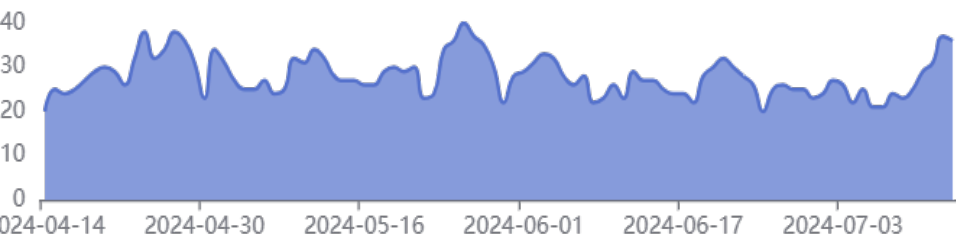
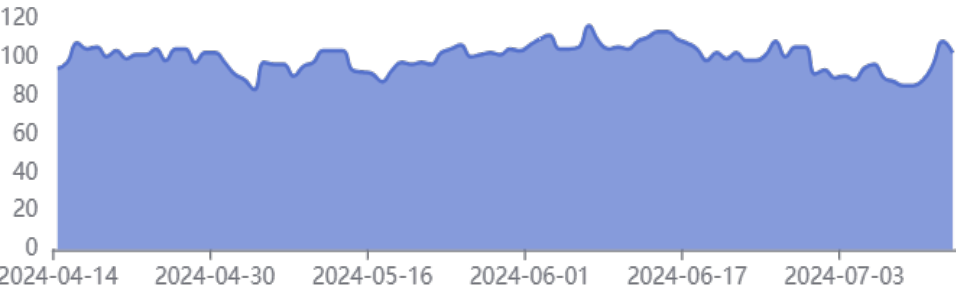
Type	M	T	W	Th	F	Sat	Sun
Pan.	141	142	138	141	136	134	134



区域：澳大利亚。最近一周好望角型散货船准备装货船舶数量。

Area: Australia. The latest week update number for Capesize with cargo loading intention.

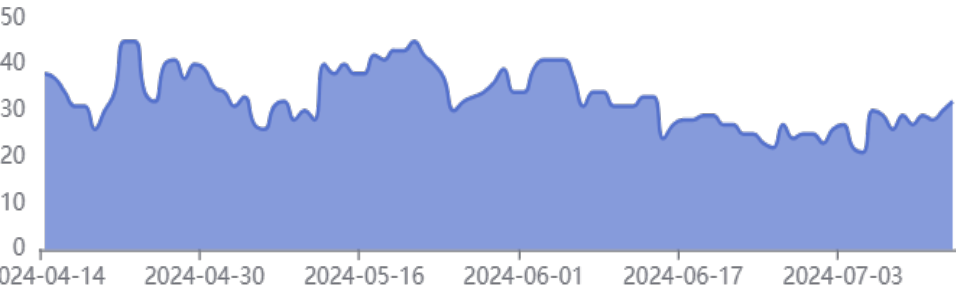
Type	M	T	W	Th	F	Sat	Sun
Cape	87	85	85	88	96	108	102



区域：黑海。最近一周巴拿马型散货船准备装货船舶数量。

Area: Black Sea. The latest week update number for Panamax with cargo loading intention.

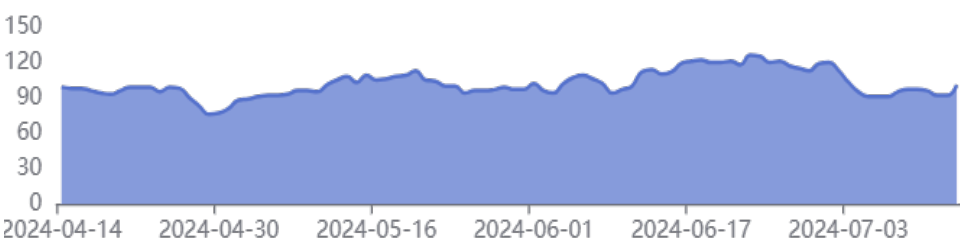
Type	M	T	W	Th	F	Sat	Sun
Pan.	14	17	17	16	19	21	19



区域：澳大利亚。最近一周巴拿马型散货船准备装货船舶数量。

Area: Australia. The latest week update number for Panamax with cargo loading intention.

Type	M	T	W	Th	F	Sat	Sun
Pan.	95	97	97	96	92	92	101

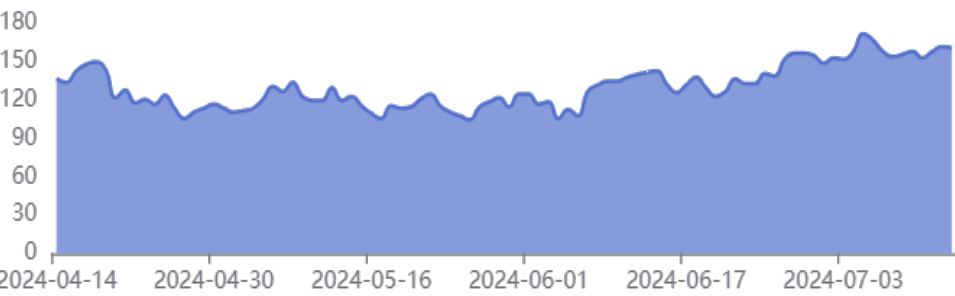


超大灵便型散货 SUPRAMAX

区域：北中国。最近一周超大灵便型散货船准备装货船舶数量。

Area: North China. The latest week update number for Supramax with cargo loading intention.

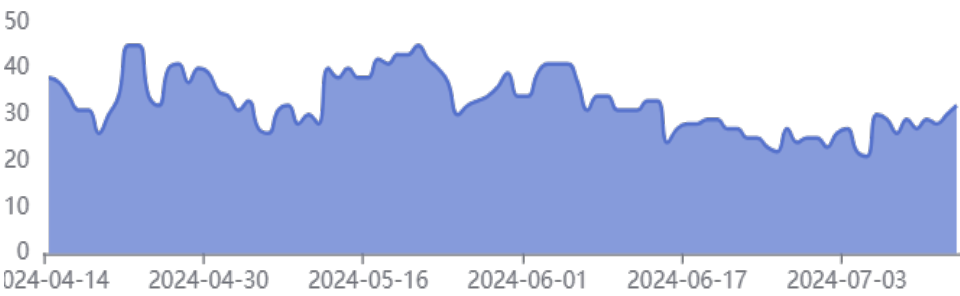
Type	M	T	W	Th	F	Sat	Sun
SMX	153	155	157	152	157	161	160



区域：黑海。最近一周巴拿马型散货船准备装货船舶数量。

Area: Black Sea. The latest week update number for Panamax with cargo loading intention.

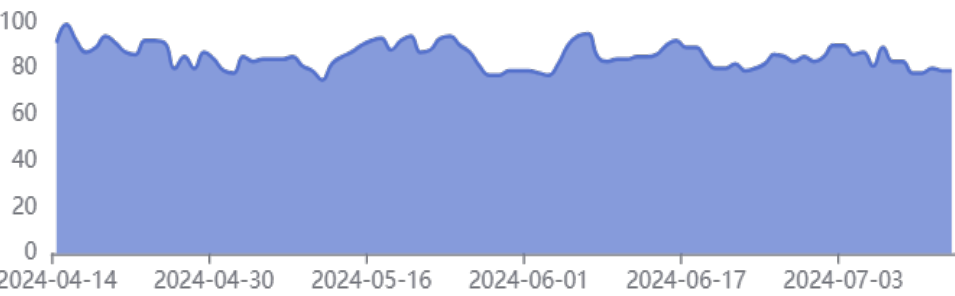
Type	M	T	W	Th	F	Sat	Sun
SMX	26	29	27	29	28	30	32



区域：美湾。最近一周超大灵便型散货船准备装货船舶数量。

Area: US Gulf. The latest week update number for Supramax with cargo loading intention.

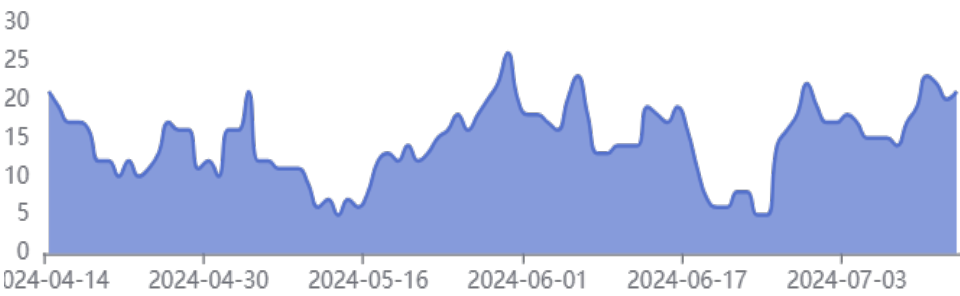
Type	M	T	W	Th	F	Sat	Sun
SMX	14	17	19	23	22	20	21



区域：南美的北部和东部。最近一周超大灵便型散货船准备装货船舶数量。

Area: South America. The latest week update number for Supramax with cargo loading intention.

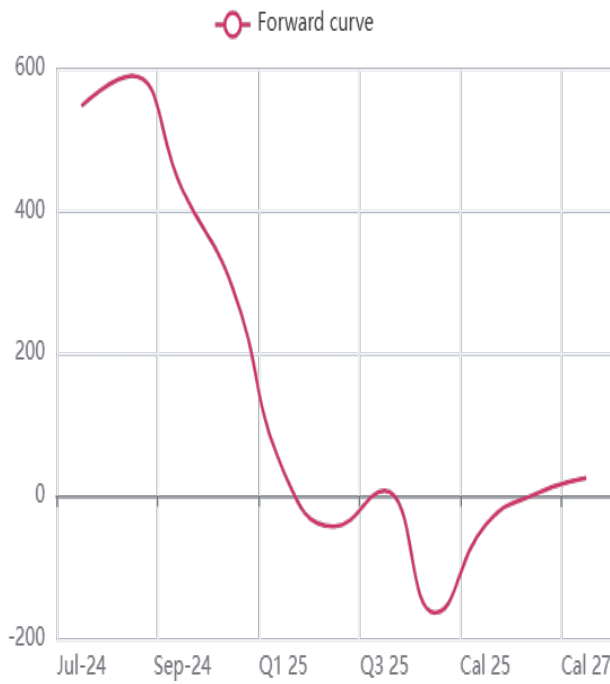
Type	M	T	W	Th	F	Sat	Sun
SMX	83	83	78	78	80	79	79



第五部分 远期运价协议 FFA

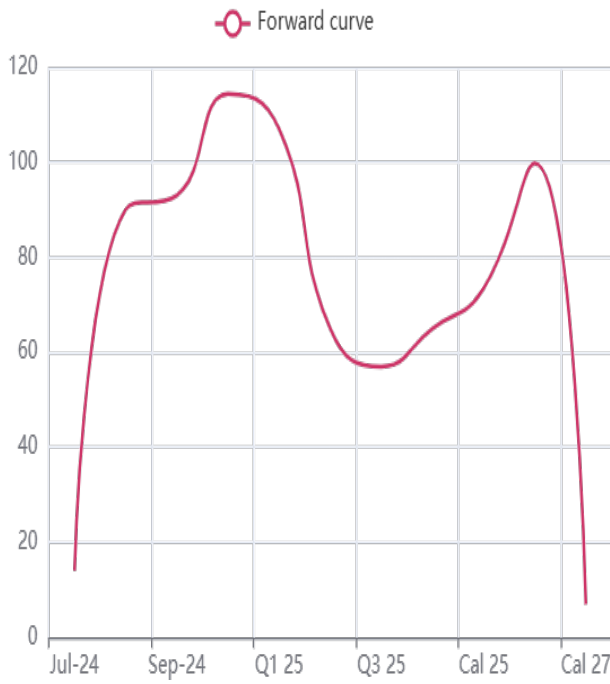
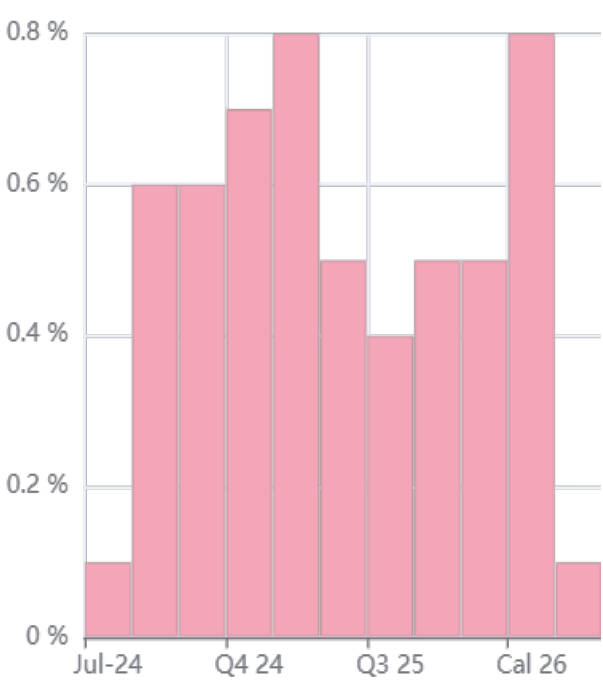
好望角型散货船Capesize

5TC	\$/day	WoW	
Jul-24	27,179.00	547.0	2.1 %
Aug-24	25,618.00	589.0	2.4 %
Sep-24	27,486.00	429.0	1.6 %
Q4 24	28,100.00	290.67	1.0 %
Q1 25	16,621.00	35.0	0.2 %
Q2 25	21,836.00	-43.0	-0.2 %
Q3 25	25,457.00	7.0	0.0 %
Q4 25	25,543.00	-164.0	-0.6 %
Cal 25	22,364.25	-41.25	-0.2 %
Cal 26	21,381.75	2.75	0.0 %
Cal 27	20,304.00	25.0	0.1 %



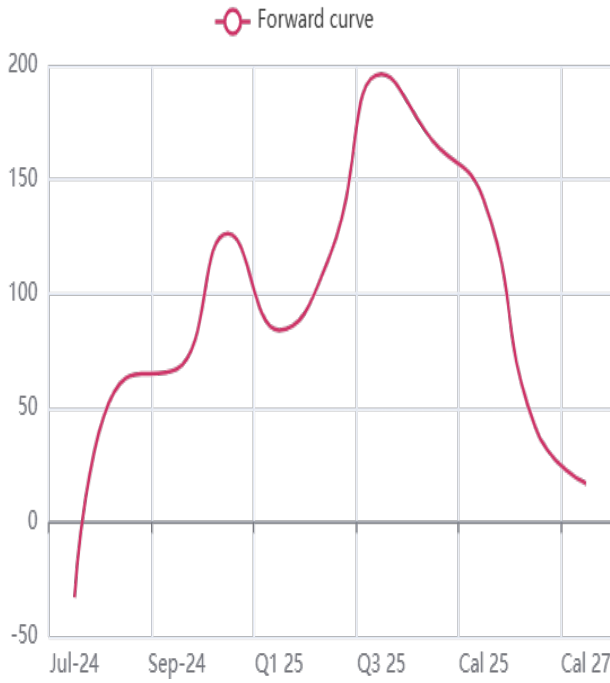
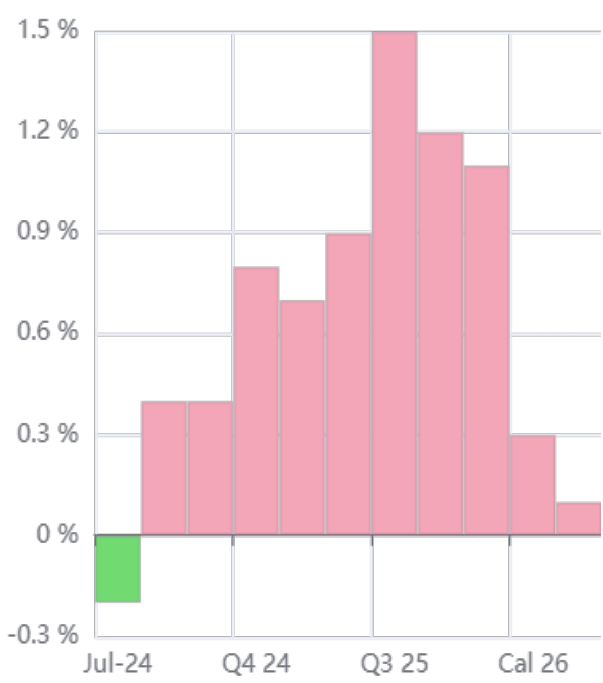
巴拿马型散货船Panamax

4TC	\$/day	WoW	
Jul-24	14,132.00	14.0	0.1 %
Aug-24	15,136.00	90.0	0.6 %
Sep-24	15,804.00	93.0	0.6 %
Q4 24	16,037.00	114.33	0.7 %
Q1 25	12,893.00	107.0	0.8 %
Q2 25	14,336.00	65.0	0.5 %
Q3 25	14,114.00	57.0	0.4 %
Q4 25	13,779.00	65.0	0.5 %
Cal 25	13,780.50	73.5	0.5 %
Cal 26	12,820.75	99.75	0.8 %
Cal 27	12,418.00	7.0	0.1 %



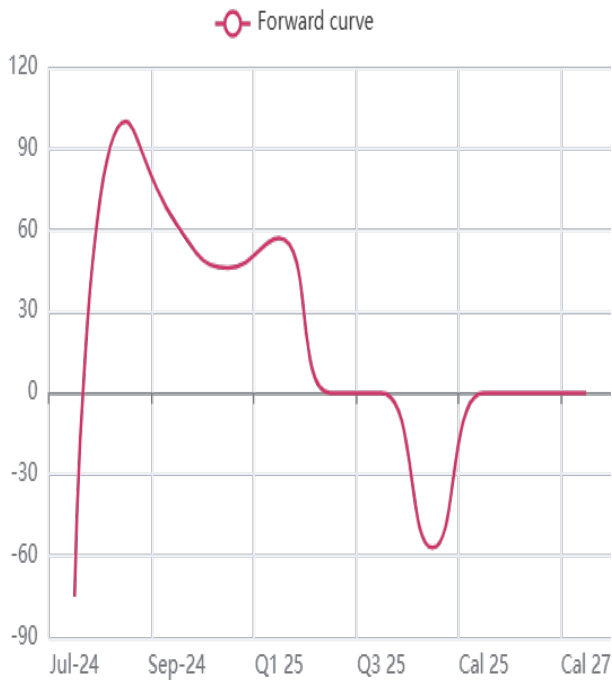
超大灵便型散货船Supramax

10TC	\$/day	WoW	
Jul-24	15,117.00	-33.0	-0.2 %
Aug-24	15,571.00	63.0	0.4 %
Sep-24	15,800.00	67.0	0.4 %
Q4 24	15,527.67	126.33	0.8 %
Q1 25	12,363.00	84.0	0.7 %
Q2 25	13,750.00	117.0	0.9 %
Q3 25	13,467.00	196.0	1.5 %
Q4 25	14,052.00	167.0	1.2 %
13,408.00	Cal 25	141.0	1.1 %
Cal 26	12,617.00	42.0	0.3 %
Cal 27	12,300.00	17.0	0.1 %



灵便型散货船Handysize

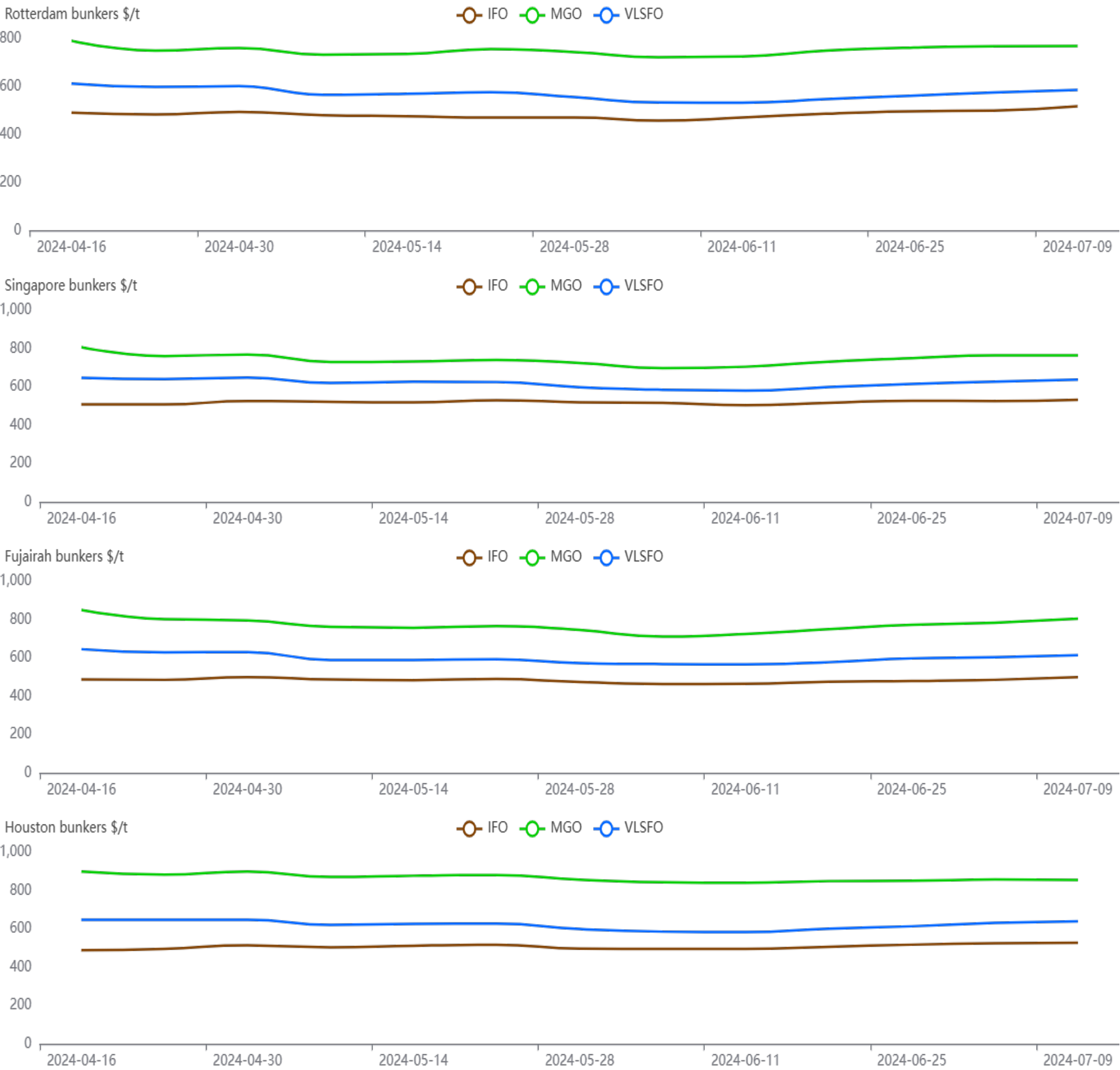
7TC	\$/day	WoW	
Jul-24	13,575.00	-75.0	-0.5 %
Aug-24	14,313.00	100.0	0.7 %
Sep-24	14,325.00	62.0	0.4 %
Q4 24	14,154.33	46.0	0.3 %
Q1 25	11,188.00	57.0	0.5 %
Q2 25	12,525.00	0.0	0.0 %
Q3 25	12,338.00	0.0	0.0
Q4 25	12,573.00	-57.0	-0.5 %
Cal 25	12,156.00	0.0	0.0 %
Cal 26	11,700.00	0.0	0.0 %
Cal 27	11,513.00	0.0	0.0 %



第六部分 燃油价格 BUNKER PRICE

MP	LO	HO	MO	SP	WoW	W%	M%
zhoushan	640.5	546.5	800.0	94.0	22.0	30.56	80.77
Singapore	638.5	533.0	765.0	105.5	3.5	3.43	39.74
Rotterdam	587.0	518.5	770.0	68.5	-6.5	-8.67	10.48
Fujairah	614.5	500.5	805.0	114.0	-3.5	-2.98	11.76
Houston	640.0	528.0	856.5	112.0	6.0	5.66	28.74

(MP-Bunkering Main Ports; LO-Heavy Low Sulphur Fuel Oil; HO-Heavy Hight Sulphur Fuel Oil; MO-MGO; SP-Spread;)



第七部分 最新商品价格 LATEST COMMODITIES PRICE

Grains and Oilseeds	Index		+/-	Weekly	Monthly	YTD
Wheat	207.0		3.0	1.47	-5.91	-11.4
Maize	197.0		6.0	3.14	-6.19	-14.97
Soybeans	228.0		4.0	1.79	-0.44	-20.92
Rice	249.0		-2.0	-0.8	-3.11	19.42
Barley	215.0		1.0	0.47	-4.87	-3.02
Energy	Index		+/-	Weekly	Monthly	YTD
Crude Oil	USD/Bbl	82.58	0.48	0.58	9.44	19.4
Brent	USD/Bbl	86.11	0.5	0.58	8.15	16.3
Natural Gas	USD/MMBtu	2.32	-0.26	-10.08	-22.15	-16.55
Gasoline	USD/Gal	2.55	0.02	0.79	7.14	0.39
Heating Oil	USD/Gal	2.58	0.02	0.78	9.32	5.31
Ethanol	USD/Gal	1.9	0.04	2.15	4.97	-25.78
Naphtha	USD/T	705.79	42.86	6.47	12.09	27.31
Propane	USD/Gal	0.85	0.09	11.84	21.43	46.55
Uranium	USD/Lbs	85.65	-0.1	-0.12	-2.0	48.31
Methanol	CNY/T	2513.0	-9.0	-0.36	-1.8	20.53
TTF Gas	EUR/MWh	33.3	-1.55	-4.45	1.68	-8.74
UK Gas	GBp/thm	77.62	-5.0	-6.05	0.35	-13.87
Industrial	Index		+/-	Weekly	Monthly	YTD
Copper	USD/Lbs	4.61	0.21	4.77	2.67	21.0
Coal	USD/T	135.75	2.55	1.91	2.07	7.95
Steel	CNY/T	3275.0	-75.0	-2.24	-5.02	-11.7
Iron Ore	USD/T	111.31	4.8	4.51	2.61	-2.79
Aluminum	USD/T	2535.0	-2.5	-0.1	-1.57	16.42
Lithium	CNY/T	91500.0	0.0	0.0	-9.85	N/A
Metals	Index		+/-	Weekly	Monthly	YTD
Gold	USD/t.oz	2380.2	55.3	2.38	3.74	22.51
Silver	USD/t.oz	31.0	1.8	6.16	4.38	33.97
Platium	USD/t.oz	1017.2	24.2	2.44	4.35	7.33
Currencies	Index		+/-	Weekly	Monthly	YTD
EUR/USD	1.08		0.0	0.0	0.0	-0.92
USD/CNY	7.29		-0.01	-0.14	0.28	0.69

第八部分 本周话题 WEEKLY TOPIC



集装箱船DALI轮最新动态

HiFleet船舶数据显示，备受关注的集装箱船DALI轮当地时间6月24早上7点（周一）自撞桥事件以来终于离开巴尔的摩港前往美国其它港口卸货与修理。离港前美国国家运输安全委员会（简称NTSB）的调查人员完成了与船员进行面对面的谈话，对船舶系统进行了详尽的检查，并测试了电气系统。目前该船已经在罗福港停靠接近20天。

美国巴尔的摩时间2024年3月26日凌晨，DALI轮离开巴尔的摩港口时，船舶失去了电力和推进力，撞上了支撑弗朗西斯·斯科特·基大桥中央桁架跨度的基座，导致桥梁坍塌。当时在桥上的六名施工人员遇难，一人受重伤，DALI轮上的一名船员受伤。

NTSB于5月发布的初步调查报告显示，DALI轮在事故前一天经历了两次停电。第一次是由于机组人员错误地堵塞了发电机的排气管。第二次是由于燃油压力不足。NTSB表示，DALI轮离港后电气断路器HR1和LR1在距离弗朗西斯·斯科特·基桥约三个船长的时候突然跳闸，这导致全船停电。调查排除了燃油本身质量的问题。

6月10日星期一，经过2个多月的工作，当地救助公司打捞并转移了5万吨的桥体残骸后，恢复了麦亨利堡联邦航道的原来运营的水平，航道宽度为700英尺，深度为50英尺，至此巴尔的摩港的进出通航恢复正常。

巴尔的摩市长和其他市政官员于4月下旬提交给法庭文件中指控该船船舶管理公司和船东在该桥梁倒塌事故中存在疏忽行为，该文件中列举了一系列指控，指责这两家相关船运公司存在“粗心、疏忽、严重疏忽和鲁莽”行为，并称该船不适航。

DALI轮事件对船舶保险市场产生很大的影响，该事件直接导致6人死亡和数十亿美元的损失，该船理赔协会围绕巴尔的摩桥梁倒塌的诉讼中面临巨额花费，同时理赔协会未来将面临更高的再保险保费。其财务影响程度到底有多严重很大程度上取决于船东和管理人的责任限制是否能成功。

船舶安全管理中存在各种各样安全风险和挑战，任何疏忽可能导致悲剧或付出惨痛代价。包括密闭空间、高空作业、热工作业、航行安全、货物保管、船舶稳性、船舶密闭、恶劣天气、团队协作与沟通、标准操作与流程等。谨慎，良好船艺，安全第一等总是萦绕在海员脑海里。各种各样的海事事故中绝大多数和人为因素有牵连。往往当船员陷入疲劳和焦虑时，其安全意识将大打折扣，往往会对安全隐患降低应有的意识。2013年正式生效的国际海事劳工公约在一定程度上对船员疲劳作业有一定帮助，但是在面对船舶高效运转，船舶营运人追求高效益的冲突局面中又经常会迫使船员不得不游走在执行公约的灰色边缘。

HiFleet ship data shows that the public concerned container vessel DALI finally left the Port of Baltimore at 7 a.m. local time (Monday) on 24th June of 2024 since the bridge collision incident to unload and repair in other ports in the United States. Investigators from the National Transportation Safety Board (NTSB) completed face-to-face interviews with the crew, conducted an exhaustive inspection of the ship's systems and tested electrical systems. So far the container vessel has been docked in the port of Norfolk for about 20 days.

In the early morning of March 26, 2024 Baltimore time, the container DALI was leaving the port of Baltimore when the ship lost power and propulsion and struck the base supporting the central truss span of the Francis Scott Key Bridge, caused the bridge to collapse. Six construction workers who were on the bridge at the time were killed, one was seriously injured, and a crew member on the DALI was injured.

A preliminary investigation report released by the NTSB in May showed that the DALI had experienced two power outages the day before the accident. The first was due to the crew mistakenly blocking the exhaust pipe of the generator. The second was due to insufficient fuel pressure. The NTSB said electrical circuit breakers HR1 and LR1 suddenly tripped about three boat lengths from the Francis Scott Key Bridge after DALI left port, which caused a whole vessel power outage. The investigation ruled out the quality of the fuel itself.

On Monday, June 10, after more than two months of salvage work, local salvage companies recovered and removed about 50,000 tons of bridge debris and restored the Fort McHenry Federal Passage to its original level of operation, with a width of 700 feet and a depth of 50 feet, and transiting of the Port of Baltimore returned to normal.

Baltimore's mayor and other city officials accused the ship's technical management company and owners of negligence in the bridge collapse in a court filing in late April, which listed a series of allegations accusing the two companies involved of "careless, negligent, grossly negligent and reckless" conduct and called the vessel unseaworthy.

The DALI incident has had a major impact on the Marine insurance market, directly resulting in the death of six people and billions of dollars in damages, the ship P&I club faces huge costs in the lawsuit surrounding the Baltimore bridge collapse, and the P&I faces higher reinsurance premiums in the future as well. The extent of the financial impact depends to a large extent on the success of the limitation of liability of shipowners and managers.

There are all kinds of safety risks and challenges in ship safety management, and any negligence may lead to tragedy or cost a terrible price. Including entering enclosed space, working aloft and overside, hot work, navigation safety, cargo carriage, ship stability, bad weather, team collaboration and communication, standard operations and procedures. Good seamanship and safety are always at the forefront of seafarers' minds. The vast majority of all kinds of maritime accidents are related to human factors. Often when the crew is tired and anxious, its safety awareness will be greatly reduced, and it will often reduce the due awareness of safety hazards. The International Maritime Labor Convention (2006 MLC), which came into effect in 2013, helps crew fatigue in management, but in the face of efficient ship operation and the conflict situation in which ship operators pursue high profit, crew members are often forced to walk in the gray edge of the implementation of the convention.

