

Shipping - Global

Shipping & supply chain high frequency tracker #47

Industry Overview

Tracking the high frequency shipping data

This report contains our favorite charts to track the shipping cycle. Container rates are expected to remain volatile but rangebound through the peak, but we see more downside to spot rates into the slack season. Tanker markets are expected to be pressured in 3Q23 as Saudi cuts weigh on demand and risks from Russian political instability, but underlying fundamentals remain positive with higher rates expected into the year-end peak season. Dry bulk freight rates appear to be finding a bottom with smaller vessel forward curves suggesting +US\$3k/day upside into 2H23 – although the recovery depends on the outlook for China macro.

Container: More downside into the slack season

US import volumes are stabilizing with June 2023 volumes +4% YoY and up +9% relative to 2019 levels, although our checks suggest a relatively muted peak season ahead. Port congestion continues to ease (6% of fleet) with US west coast contracts concluded, although Canada strike action remains a risk. Liners are pushing for 1 July hikes – but we see freight rates as volatile within a large range through the upcoming peak with idle rates at just 0.4%. We see more downside to freight rates after the peak season with some key trades still very profitable (Mediterranean +120% above pre-COVID, Middle East +55% above pre-COVID).

Tanker: Watch Saudi cuts & Russian political instability

Tanker demand remains strong with crude on the water near recent highs and crude tanker shipments for 5M23 trending +5.5% YoY. Chinese imports remain robust and US exports are firm (although down from peaks) but we are watching risks to Russian exports closely given political instability. Saudi production cuts suggest a challenging 3Q23 with VLCC forward curves to September at US\$20-30k per day implying more volatility ahead. But the fundamental outlook remains positive (VLCC time charter rates at US\$35-40k/day) supported by a low orderbook and ongoing long-distance shipments.

Bulker: Forward curves still point to a better 2H23

Dry bulk demand has trended at 3-4% YoY higher so far in 5M23 led by strong major bulk demand particularly for coal. Freight rates have been unseasonably low through June 2023 on easing Chinese coal imports & softer macro combined with lower vessel congestion – although larger to mid-sized vessels appear to have found a bottom. Forward curves suggest that 2H23 handysize/supramax rates can average +US\$3k/day higher than current spot levels helped by seasonality – but the extent of the uptick will depend on China macro and any stimulus measures.

27 June 2023

Equity
Global
Shipping

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Abbreviations

CCFI: China Containerized Freight Index

VLCC: Very Large Crude Carrier

ILWU: International Longshore and
Warehouse Union

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Refer to important disclosures on page 23 to 25.

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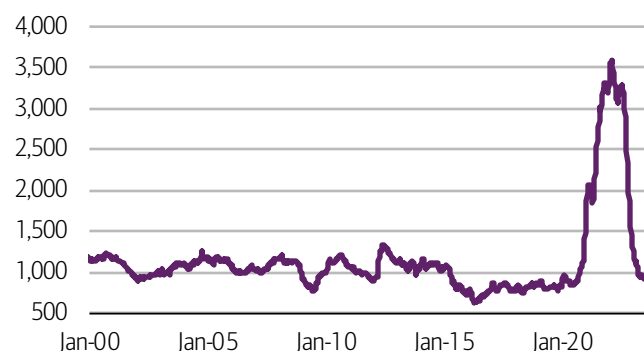
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Container shipping

Blended freight rates

Exhibit 1: China Containerized Freight Index, 2000-23

CCFI trending at 920



Source: Shanghai Shipping Exchange

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Exhibit 2: CCFI quarterly average, 2022-23

CCFI trending -13% QoQ lower so far in 2Q23

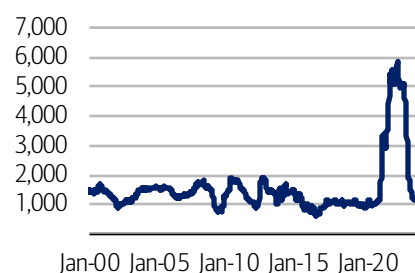
CCFI	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23
CCFI	3,444	3,157	2,950	1,615	1,087	942
CCFI Europe	5,526	5,060	4,738	2,497	1,411	1,159
CCFI USWC	2,596	2,502	2,331	1,079	789	711
CCFI USEC	2,682	2,796	2,844	1,746	1,161	892
% YoY						
CCFI	75%	46%	-1%	-51%	-68%	-70%
CCFI Europe	77%	45%	-7%	-53%	-74%	-77%
CCFI USWC	95%	69%	13%	-53%	-70%	-72%
CCFI USEC	79%	59%	22%	-31%	-57%	-68%
% QoQ						
CCFI	5%	-8%	-7%	-45%	-33%	-13%
CCFI Europe	5%	-8%	-6%	-47%	-44%	-18%
CCFI USWC	12%	-4%	-7%	-54%	-27%	-10%
CCFI USEC	6%	4%	2%	-39%	-34%	-23%

Source: Shanghai Shipping Exchange

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Exhibit 3: CCFI Europe, 2000-23

CCFI Europe at 1,119

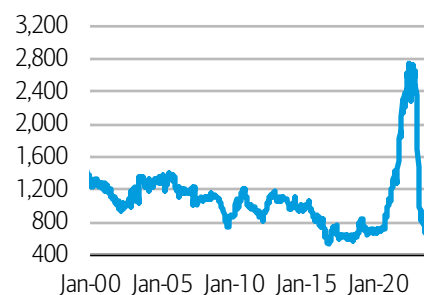


Source: Shanghai Shipping Exchange

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Exhibit 4: CCFI, US west coast, 2000-23

CCFI US west coast at 715

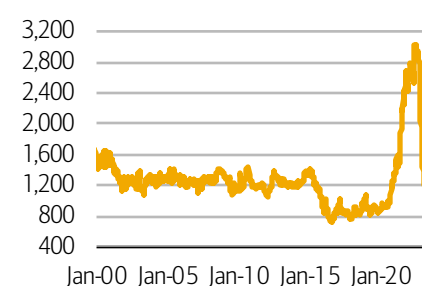


Source: Shanghai Shipping Exchange

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Exhibit 5: CCFI US east coast, 2000-23

CCFI east coast tracking at 858

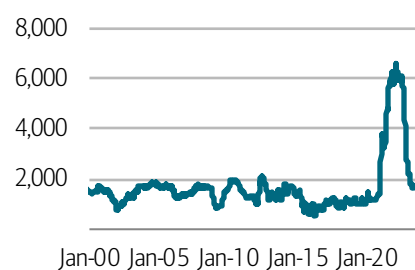


Source: Shanghai Shipping Exchange

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Exhibit 6: CCFI Mediterranean, 2000-23

CCFI Med tracking at 1,628

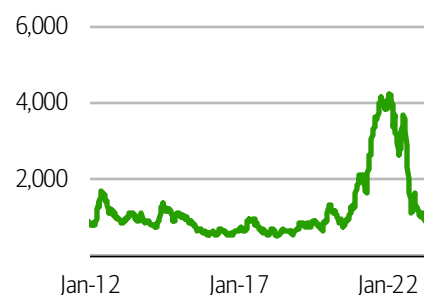


Source: Shanghai Shipping Exchange

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Exhibit 7: CCFI Middle East, 2000-23

CCFI Middle East at 1,153

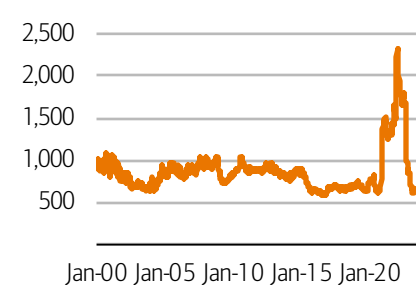


Source: Shanghai Shipping Exchange

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Exhibit 8: CCFI Singapore, 2000-23

CCFI Singapore at 599



Source: Shanghai Shipping Exchange

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Spot freight rates

Exhibit 9: Shanghai Containerized Freight Index, 2009-23

SCFI at 924



Source: Shanghai Shipping Exchange

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Exhibit 10: SCFI quarterly average, 2022-23

SCFI trending 2% QoQ higher in 2Q23 on April transpacific hikes

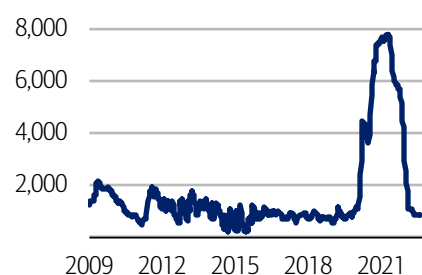
SCFI	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23
SCFI	4,851	4,211	3,279	1,375	969	986
SCFI Europe	7,435	5,959	4,656	1,490	926	855
SCFI USWC	8,032	7,773	5,278	1,627	1,265	1,420
SCFI USEC	11,008	10,409	8,557	4,126	2,438	2,366
% YoY						
SCFI	74%	29%	-24%	-71%	-80%	-77%
SCFI Europe	81%	15%	-36%	-80%	-88%	-86%
SCFI USWC	100%	68%	-9%	-76%	-84%	-82%
SCFI USEC	130%	47%	-20%	-62%	-78%	-77%
% QoQ						
SCFI	3%	-13%	-22%	-58%	-30%	2%
SCFI Europe	-3%	-20%	-22%	-68%	-38%	-8%
SCFI USWC	18%	-3%	-32%	-69%	-22%	12%
SCFI USEC	2%	-5%	-18%	-52%	-41%	-3%

Source: Shanghai Shipping Exchange

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Exhibit 11: SCFI: Asia-Europe, 2009-23 (USD/TEU)

SCFI Europe at US\$793/TEU

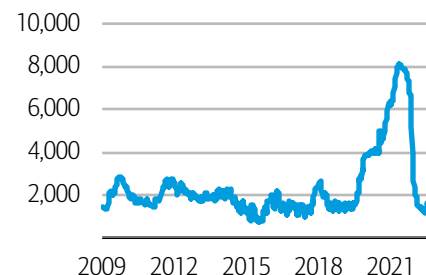


Source: Shanghai Shipping Exchange

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Exhibit 12: SCFI: Asia to US west coast, 2009-22 (USD/FEU)

SCFI USWC at US\$1,173 /FEU

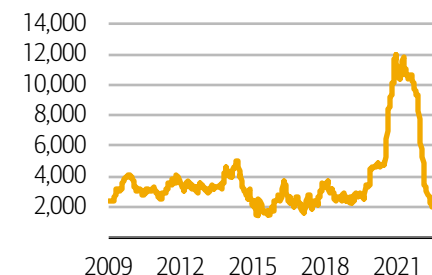


Source: Shanghai Shipping Exchange

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Exhibit 13: SCFI: Asia to US east coast, 2009-22 (USD/FEU)

SCFI USEC at US\$2,061 /FEU

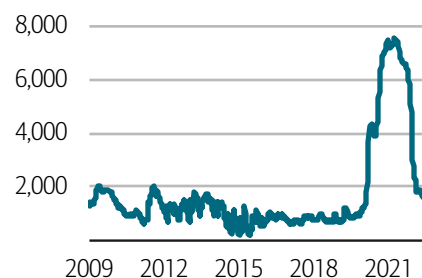


Source: Shanghai Shipping Exchange

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Exhibit 14: Asia-Mediterranean, 2009-22 (USD/TEU)

SCFI Med at US\$1,588 /TEU

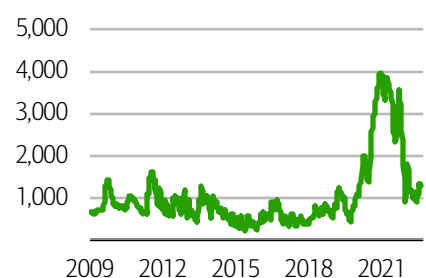


Source: Shanghai Shipping Exchange

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Exhibit 15: SCFI: Asia-Middle East, 2009-22 (USD/TEU)

SCFI Middle East US\$1,226 /TEU

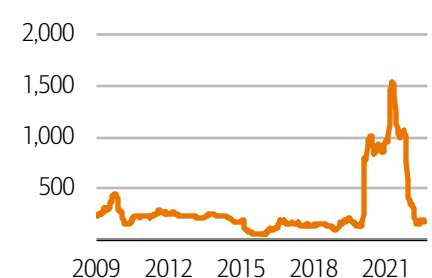


Source: Shanghai Shipping Exchange

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Exhibit 16 SCFI: Asia-Singapore, 2009-22 (USD/TEU)

SCFI Singapore at US\$165 /TEU

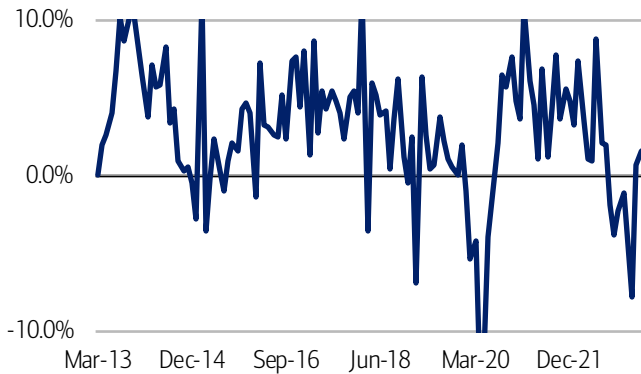


Source: Shanghai Shipping Exchange

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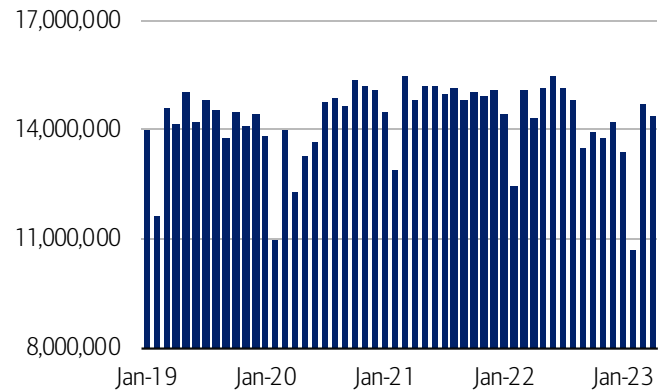
World trade trends

Exhibit 17: Global container volume growth (YoY %) #
World trade back to slightly above 2019 levels in April 2023



Source: CTS, BofA Global Research estimates, # 2021 data compared to 2019
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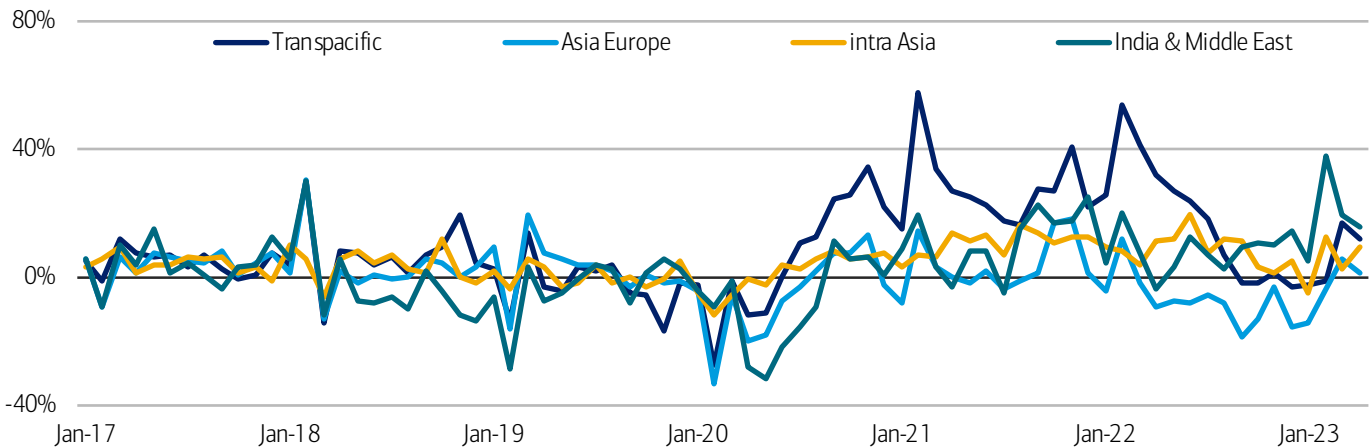
Exhibit 18: Global monthly container volumes (TEU), 2019-23
World trade seasonally rebounded in March-April 2023



Source: CTS, BofA Global Research estimates

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Exhibit 19: Container volumes by route (% YoY), 2017-23 #
Transpacific volumes slightly above 2019 levels

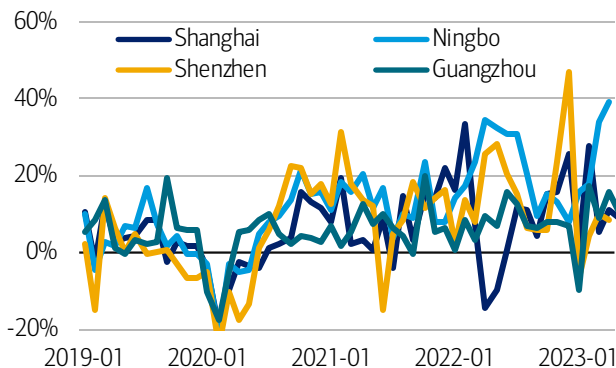


Source: CTS # 2021-23 relative to 2019 levels

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Chinese trade trends

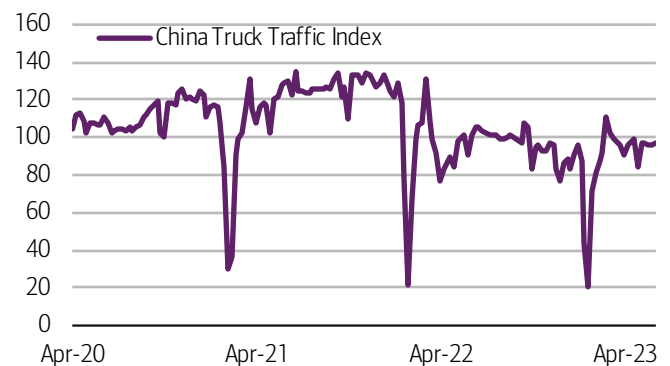
Exhibit 20: Chinese monthly port data (% YoY), 2019-23
Strong Ningbo April monthly port numbers



Source: Company reports

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Exhibit 21: China truck traffic index, 2020-23
China trucking demand rebounding after May holidays



Source: G7

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US high frequency container volumes

Exhibit 22: US weekly container imports vs 2019 levels

US weekly imports trending +4% above 2019 levels in June 2023

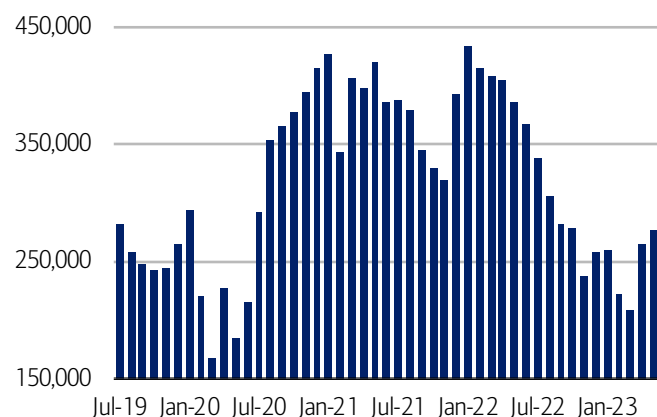


Source: PIERIS

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Exhibit 24: US furniture monthly imports (TEU), 2019-23

US furniture imports around 280k TEU /month in May

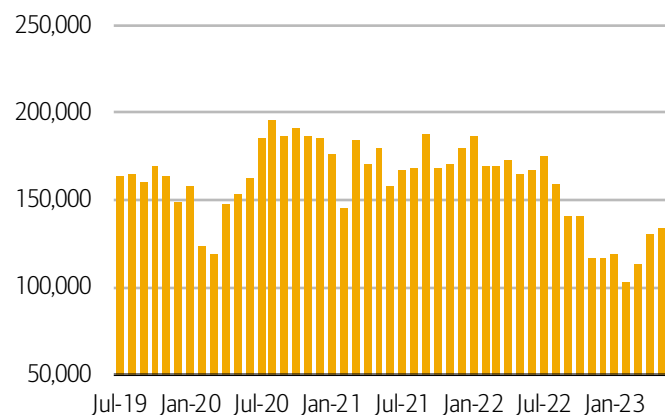


Source: PIERIS

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Exhibit 26: US electronic monthly imports (TEU), 2019-23

US electronics imports trending at 135k TEU /month in May

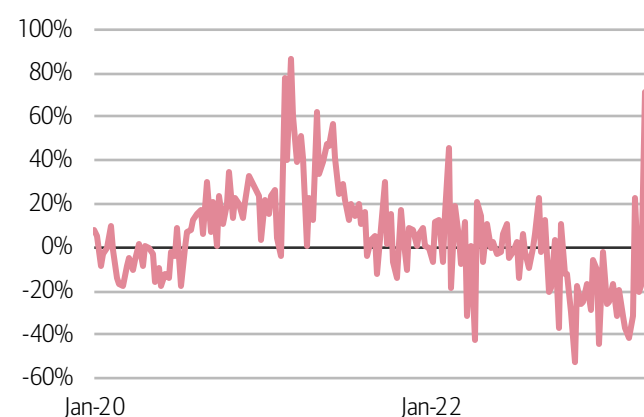


Source: PIERIS

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Exhibit 23: US weekly container imports (% YoY growth), 2020-23

US weekly imports around -18% YoY lower in May & June 2023

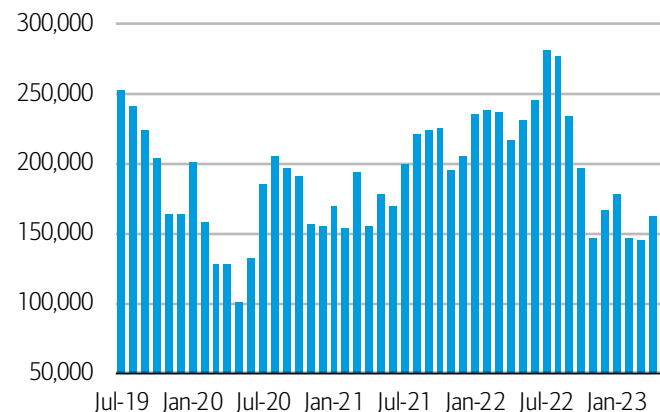


Source: PIERIS

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Exhibit 25: US apparel & footwear imports (TEU), 2019-23

US apparel & footwear imports above 190k TEU in May

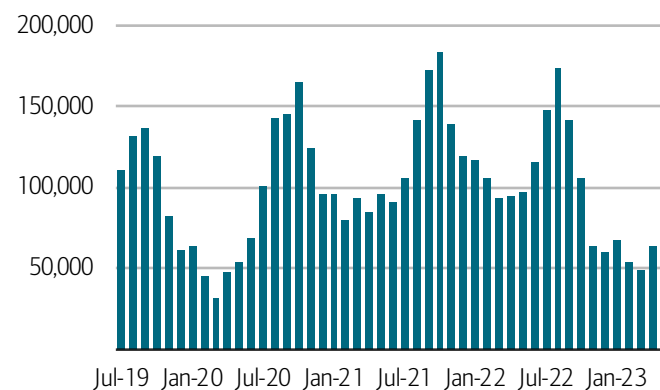


Source: PIERIS

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Exhibit 27: US toy & leisure monthly imports (TEU), 2019-23

US toy & leisure imports at 70k TEU in April



Source: PIERIS

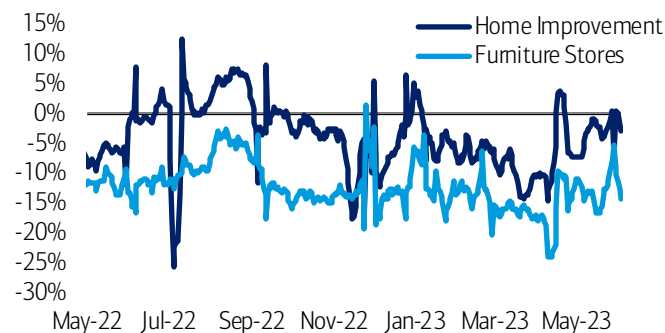
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US consumer reads

For more on BAC card spending data, and a detailed explanation of the methodology, disclaimers and limitations in connection with such data see: [BofA on USA](#).

Exhibit 28: Spending per HH at home improvement and furniture stores, based on BAC aggregated card data (y/y % change of the 7-day ma of spending levels)

Furniture and home improvement spending growth was negative on a y/y basis in the week ending Jun 3

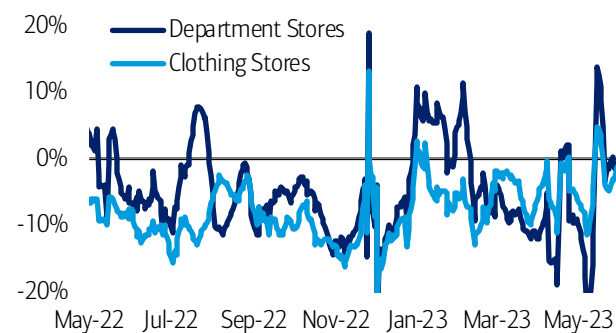


Source: BAC internal data

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Exhibit 29: Spending per HH at department and clothing stores, based on BAC aggregated card data (y/y % change of the 7-day ma of spending levels)

Y/y clothing spending growth has largely been negative for the last year

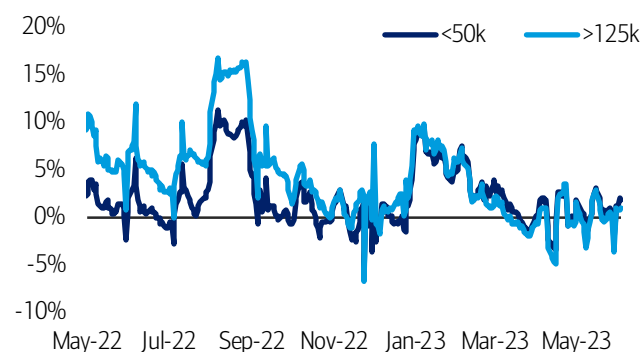


Source: BAC internal data

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Exhibit 30: Total spending ex grocery and gas per HH by income group, based on aggregated BAC card data (y/y % change of the 7-day moving average of spending levels)

Total card spending ex grocery and gas was weaker among higher-income HHs than lower-income HHs in the week ending Jun 3



Source: BAC internal data

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Exhibit 31: Aggregated monthly card spending per HH by major category (%m/m, SA)

Card spending was generally solid in May

	May-23	Apr-23	Mar-23	Feb-23	Jan-23	Dec-22
Gas	-3.4%	0.7%	-4.8%	0.7%	-0.1%	-4.0%
Furniture	0.8%	-1.2%	-2.8%	-1.4%	0.5%	-5.3%
Home improvement	1.1%	0.2%	-1.9%	0.2%	-0.1%	-0.5%
Clothing	1.0%	-0.4%	0.2%	-2.0%	4.6%	-5.7%
Grocery	1.3%	-0.3%	0.3%	0.1%	-0.3%	-0.4%
General Merchandise	0.4%	-0.1%	-0.5%	-0.2%	3.0%	-0.4%
Department Store	1.4%	1.7%	-4.9%	-0.6%	1.4%	-1.0%
Restaurants	0.0%	0.3%	-0.4%	0.1%	0.8%	0.3%
Lodging	0.4%	-0.8%	-2.1%	0.3%	-2.4%	2.3%
Airlines	0.3%	-4.2%	1.4%	-0.8%	8.6%	-0.9%
Total online retail (card not present)	-0.3%	1.0%	-1.5%	0.7%	0.2%	-1.0%

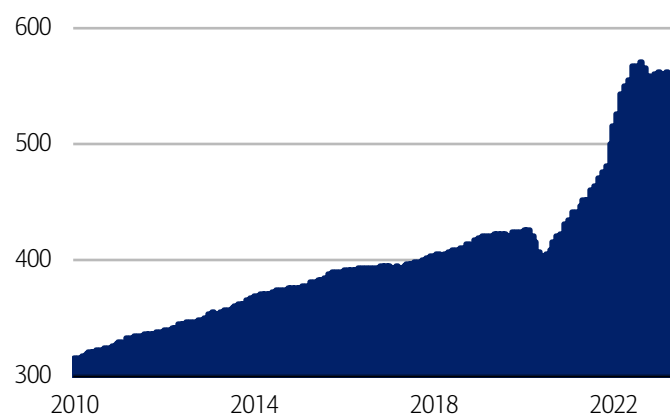
Source: BAC internal data. Card not present is largely online but could include purchases made over the phone.

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US retail inventory levels

Exhibit 32: US retail (ex-auto) inventories (US\$bn), 2010-23

Retail inventories are well above pre-COVID levels

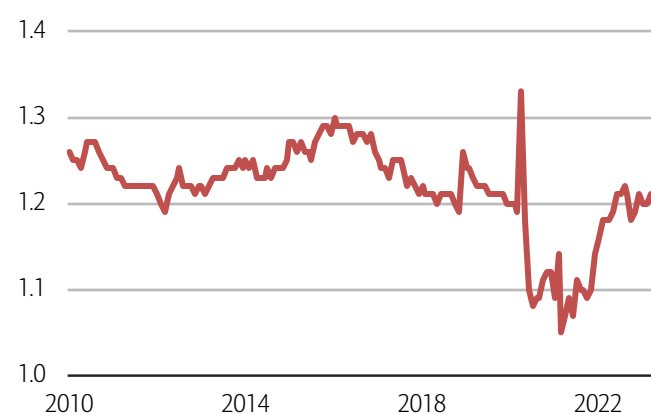


Source: Bloomberg

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Exhibit 33: US retail (ex-auto) inventory to sales ratio, 2010-23

Retail adjusted inventories to sales at 1.2x back to historical average

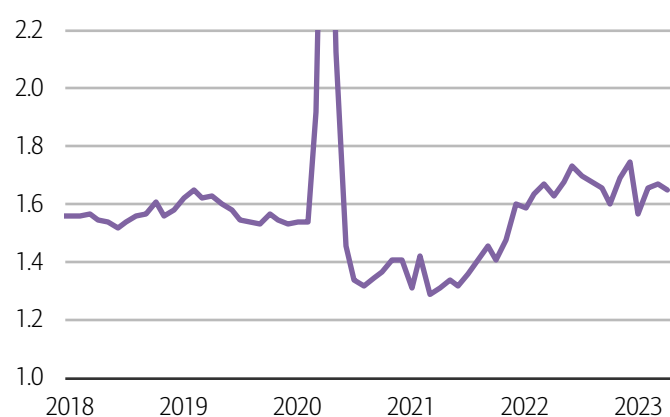


Source: Bloomberg

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Exhibit 34: Furniture – adjusted inventory to sales, 2018-23

Furniture inventory-to-sales also above pre-COVID levels

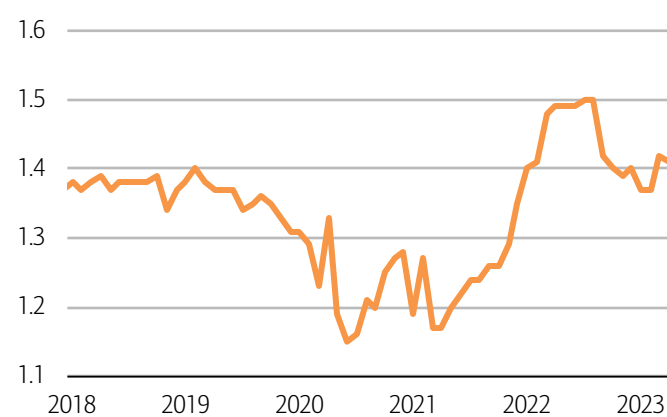


Source: Bloomberg

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Exhibit 35: General merchandise – adjusted inventory to sales, 2018-23

General merchandise inventory-to-sales is back to above 2019 levels

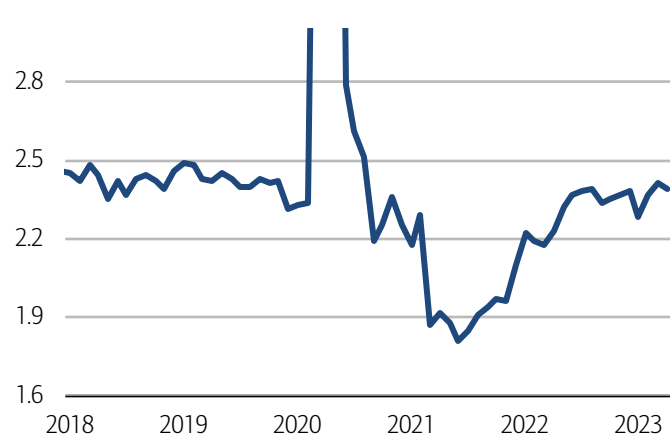


Source: Bloomberg

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Exhibit 36: Clothing – adjusted inventory to sales, 2018-23

Clothing inventory to sales nearly back to pre-COVID levels

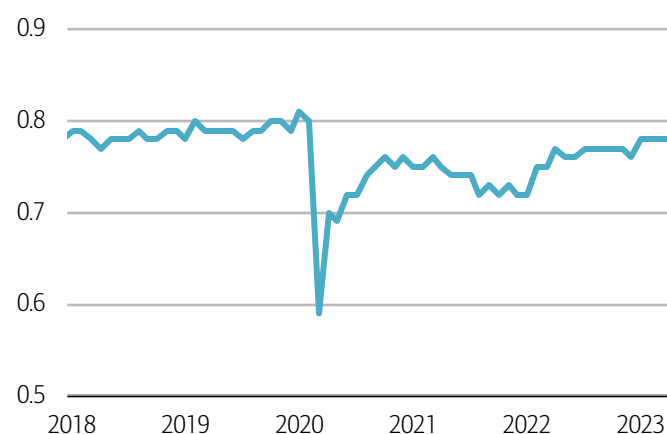


Source: Bloomberg

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Exhibit 37: Food & Beverage – adjusted inventory to sales, 2018-23

Food & beverage inventory to sales still below pre-COVID levels



Source: Bloomberg

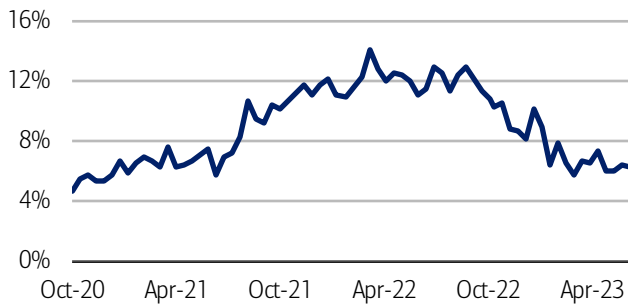
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Port congestion & idling

Below charts show port congestion measures globally:

Exhibit 38: Port congestion - % of fleet, 2020-23

Port congestion at 6.4% of fleet

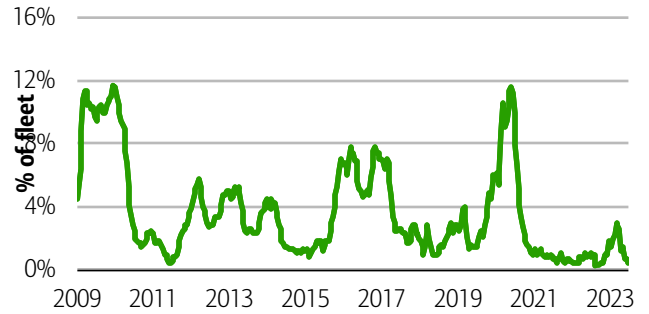


Source: Linerlytica

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Exhibit 39: Container vessel idling rate (%), 2009-23 (check excel)

Idling rate down to 0.4% of the fleet



Source: Linerlytica, Alphaliner

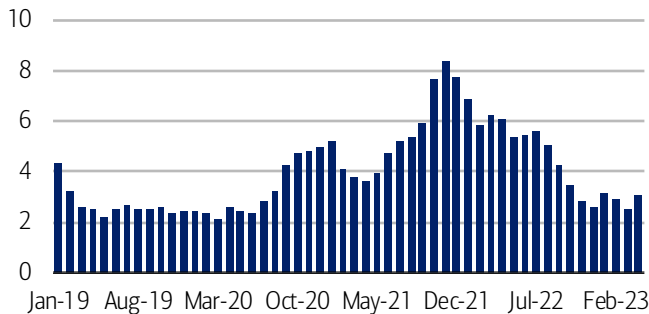
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US inland congestion trackers

Below shows how quickly container boxes move from the terminal yard to inland transport at Port of LA/Long Beach.

Exhibit 40: US West Coast ports – average box dwell time (days)

Boxes are waiting at terminal yards for 2.9 days before pickup

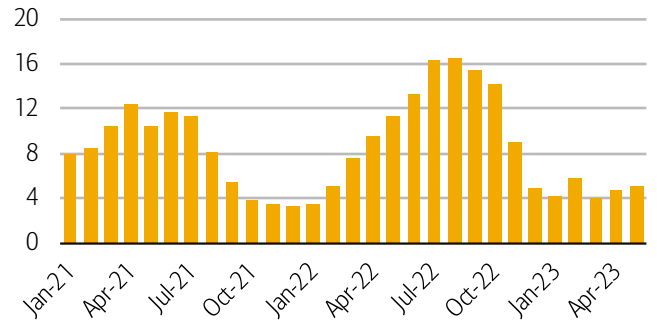


Source: PMSA

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Exhibit 41: US West Coast ports – average rail box dwell time (days)

Boxes are waiting at terminal yards for 5.2 days before rail pickup up



Source: PMSA

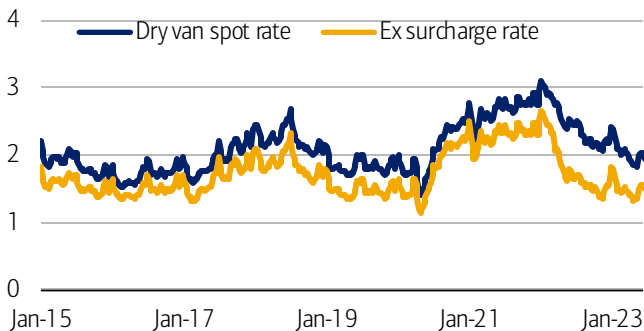
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US trucking spot rates

Below shows US spot trucking rates and truck supply proxied by truck driver employees:

Exhibit 42: Spot trucking rates (US\$/mile), 2015-23

Spot trucking rates dipping again into May 2023

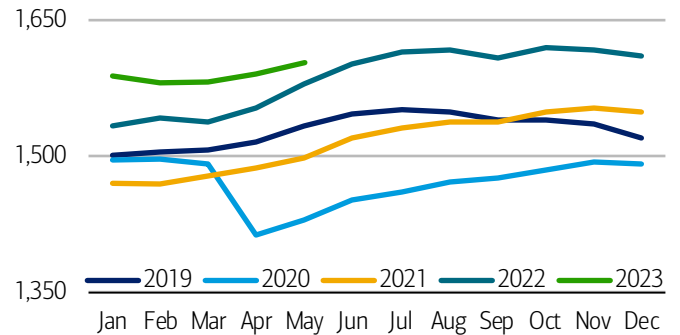


Source: Truckstop.com

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Exhibit 43: US truck driver employees (thousands), 2019-23

US employees in truck transport are above pre-COVID levels



Source: St Louis Fed

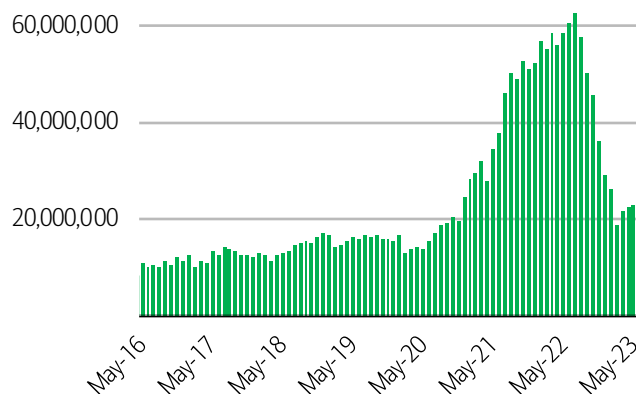
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Container liner monthly revenue

Mixed reads for Taiwanese May monthly revenues:

Exhibit 44: Evergreen – monthly revenue (NT\$K)

Evergreen May monthly revenues: -61% YoY, +3% MoM

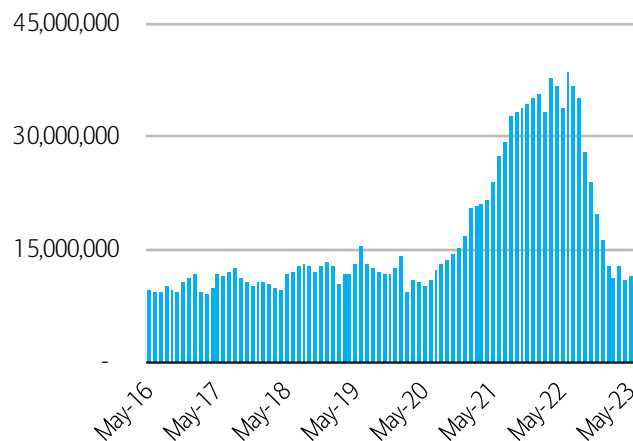


Source: Company reports

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Exhibit 45: Yang Ming – monthly revenue (NT\$K)

Yang Ming May monthly revenues: -66% YoY, +5% MoM



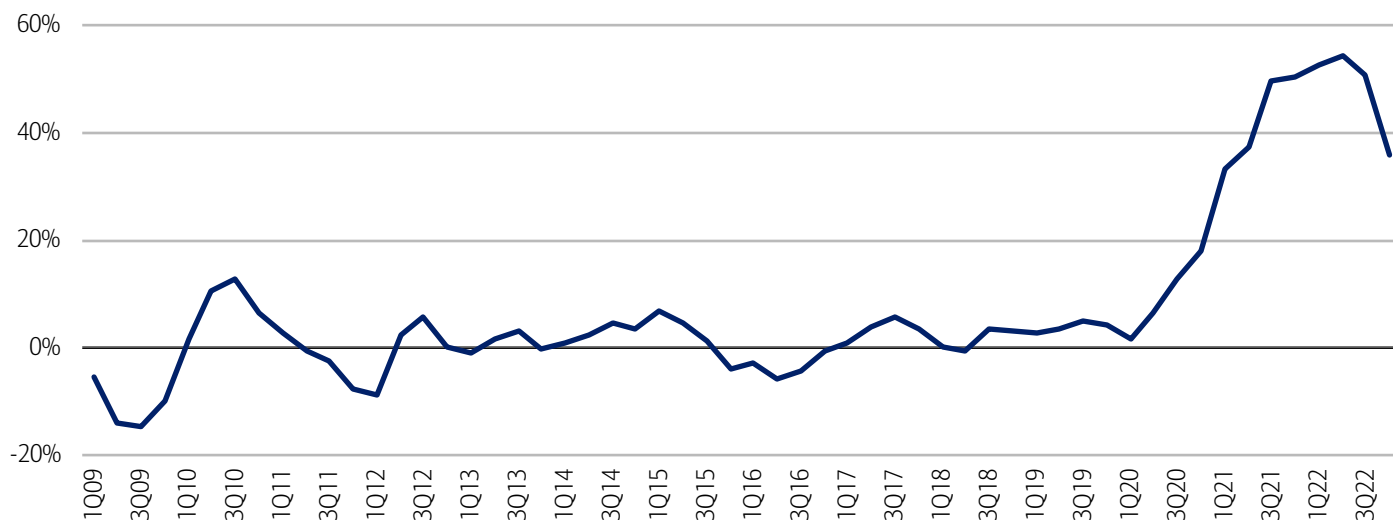
Source: Company reports

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Container liner average EBIT margins

Exhibit 46: Container liner average quarterly EBIT margin, 2009-22

4Q22 average EBIT margins at ~36%



Source: Linerlytica

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Vessel supply-side trends

Exhibit 47: Container shipping orderbook to fleet, 1996-2023

Container shipping orderbook stands at around 28% of fleet right now

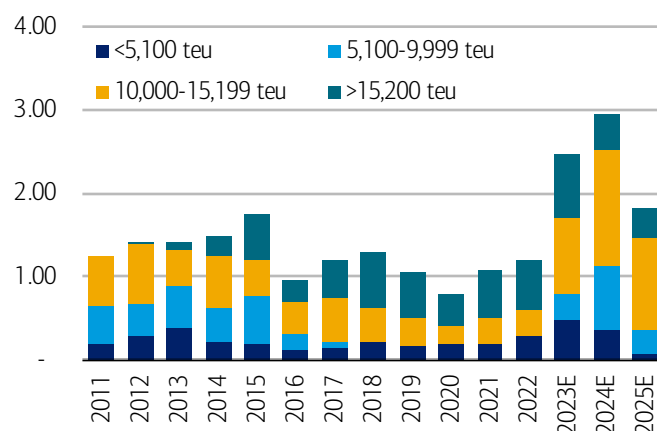


Source: Clarksons

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Exhibit 48: Delivery by vessel size (mn TEU), 2011-2023E

Deliveries to ramp again in 2023 with ~ 2.5mn TEU for delivery

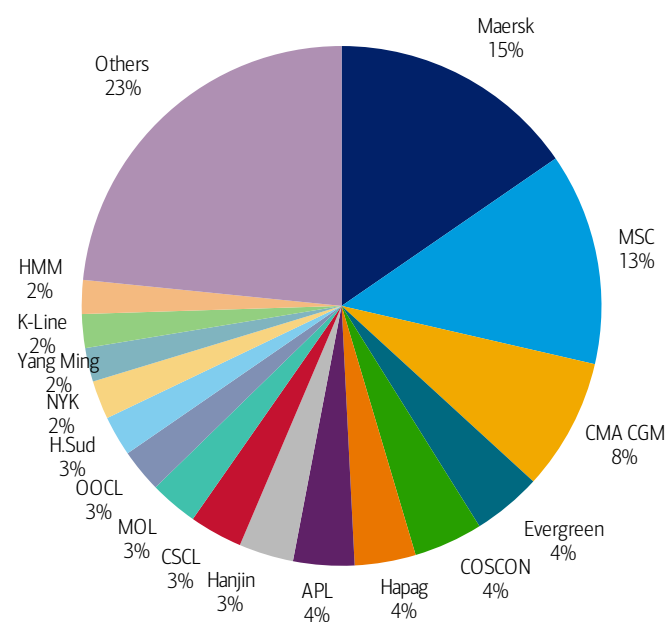


Source: Alphaliner

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Exhibit 49: Container liner capacity share in 2013

Top 16 carriers in 2013 = 77% market share

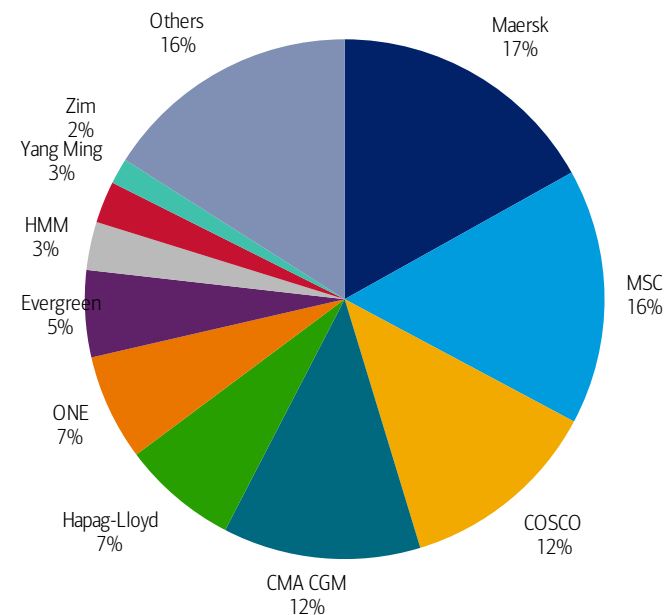


Source: Alphaliner

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Exhibit 50: Container liner capacity share in 2021

Top 10 carriers in 2021 = 85% market share

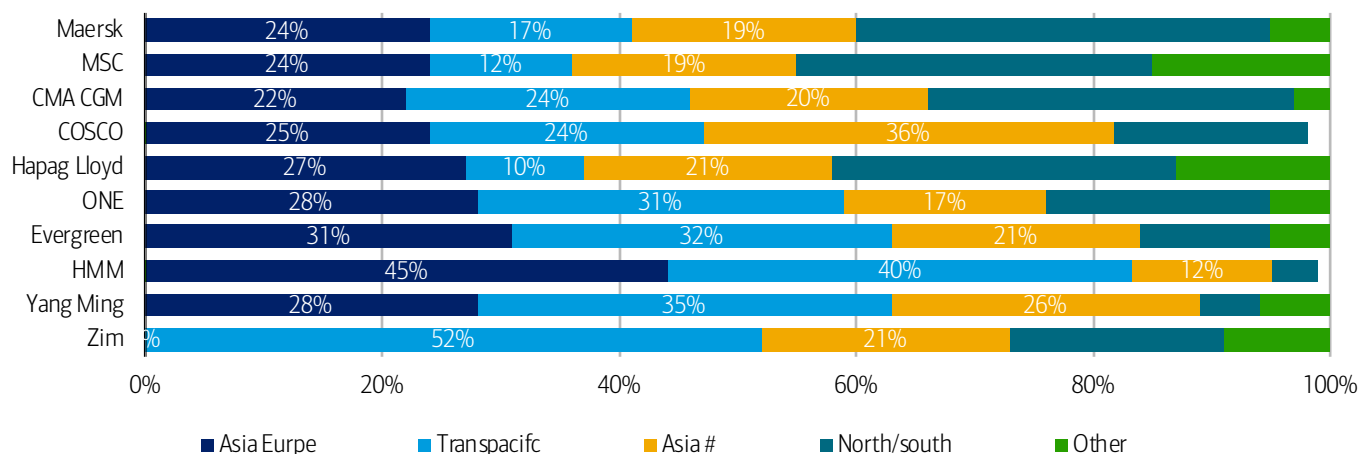


Source: Alphaliner

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Exhibit 51: Container liner capacity by route

Container liner capacity deployment by route

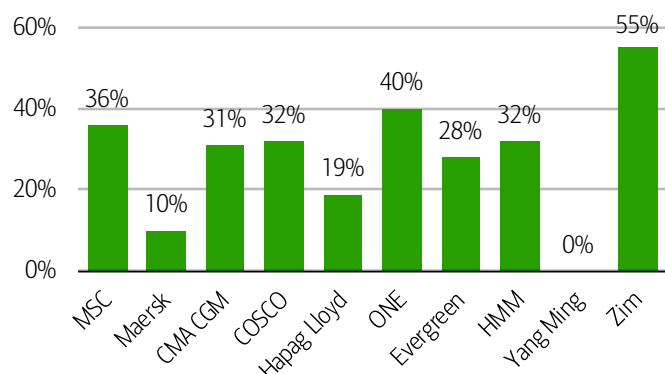


Source: Alphaliner # Asia includes Middle East, India, Australia

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Exhibit 52: Container liners – orderbook to fleet

Larger orderbooks for Zim, Evergreen and MSC

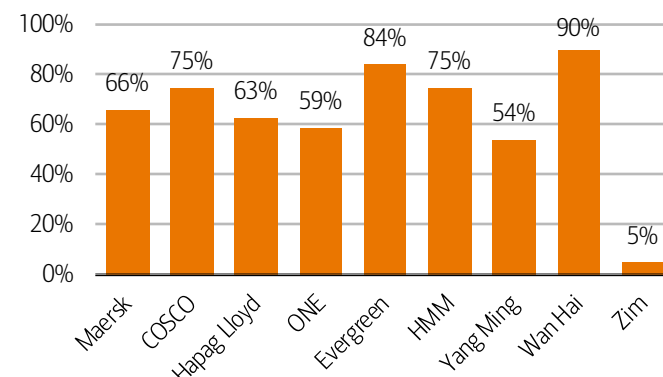


Source: Linerlytica

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Exhibit 53: Container liners - % of fleet which is owned/finance lease

Liners own or finance lease more than half their fleet on average

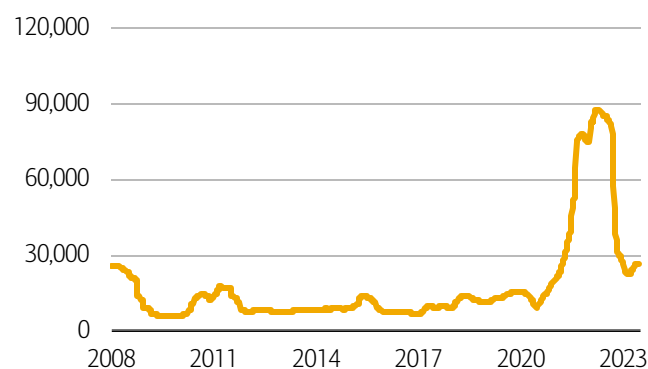


Source: Linerlytica

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Container shipping costs**Exhibit 54: Average containership charter rate (US\$/day), 2008-23**

Average charter rates holding for now

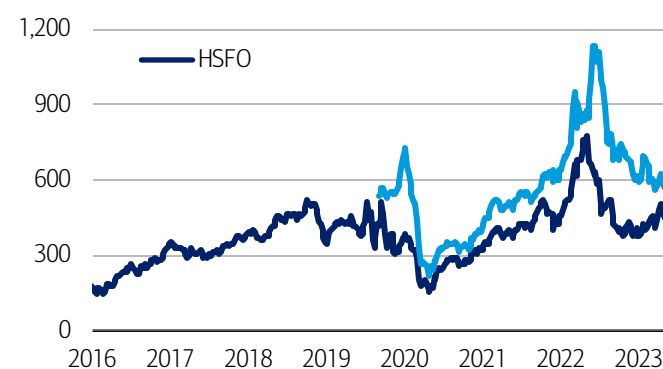


Source: Clarksons

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Exhibit 55: Singapore bunker price (US\$/tonne), 2016-23

VLSFO is at ~US\$615/tonne



Source: Clarksons

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Container vessel sailing speeds

Exhibit 56: Container vessel average sailing speed (knots), 2012-23

Container vessels now sailing below 14 knots

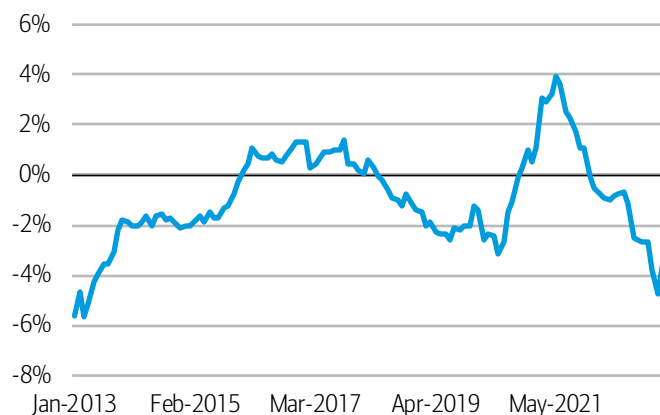


Source: Clarksons

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Exhibit 57: Container vessel speeds (% YoY growth), 2013-23

Vessel speed still slower YoY



Source: Clarksons

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Container shipping - demand & supply outlook

Exhibit 58: Container shipping demand & supply outlook, 2014-25E

Container shipping faces heavy oversupply into 2023-24

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E
Demand growth (TEU)	5.3%	1.3%	3.0%	6.6%	5.2%	2.5%	-0.7%	6.7%	0.8%	-0.5%	2.7%	2.7%
New vessel deliveries	8.6%	9.4%	4.7%	5.9%	6.1%	4.7%	3.7%	4.5%	4.4%	8.7%	9.5%	6.1%
Demolition	-2.1%	-0.1%	-2.9%	-2.0%	-0.2%	-0.9%	-0.7%	-0.1%	-0.1%	-1.0%	-2.6%	-2.6%
Net Slot Capacity Growth	6.5%	9.4%	1.7%	3.9%	5.9%	3.9%	3.0%	4.4%	4.3%	7.7%	6.9%	3.5%
Impact of change in idle rate	1.4%	-0.7%	-3.5%	2.9%	1.6%	-1.3%	-2.9%	5.2%	0.0%	-2.2%	-2.0%	0.0%
Impact of change in congestion	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-1.9%	-5.2%	-4.8%	6.5%	4.3%	0.0%
"In service" capacity growth (TEU)	7.9%	8.7%	-1.7%	6.7%	7.5%	2.6%	-1.8%	4.4%	-0.5%	12.0%	9.2%	3.5%
Effective Demand / Supply balance	-2.6%	-7.4%	+4.7%	-0.1%	-2.3%	-0.1%	+1.1%	+2.3%	+1.3%	-12.5%	-6.5%	-0.8%

Source: BofA Global Research estimates, Linerlytica

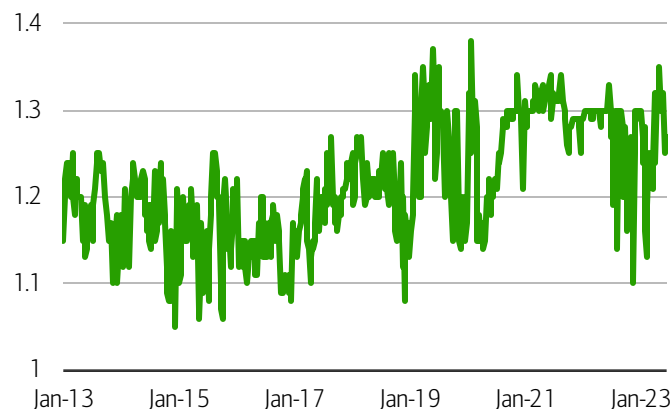
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Tanker shipping

Freight rates

Exhibit 59: VLCC supply vs demand in Middle East #

VLCC supply vs demand in Middle East #



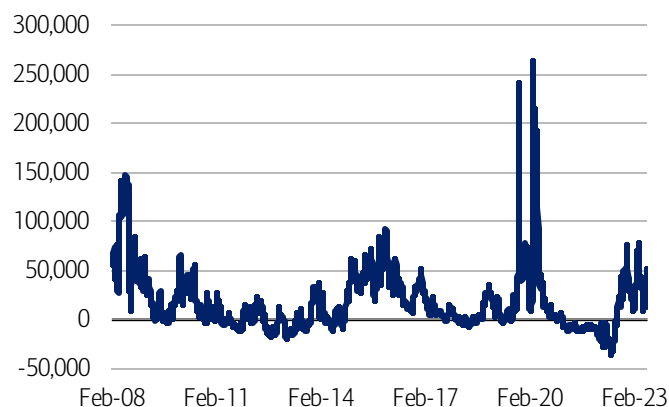
Source: Bloomberg

1 indicates equal number of VLCC supply vs demand for next 30 days, 1.1 indicates 10% surplus of VLCC relative to demand in coming 30 days,

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Exhibit 61: VLCC freight rates (US\$/day), 2008-23

Baltic VLCC rates back to US\$20-30k per day



Source: Clarksons

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Exhibit 60: Average quarterly tanker rates (US\$/day), 2022-23

Average quarterly tanker rates

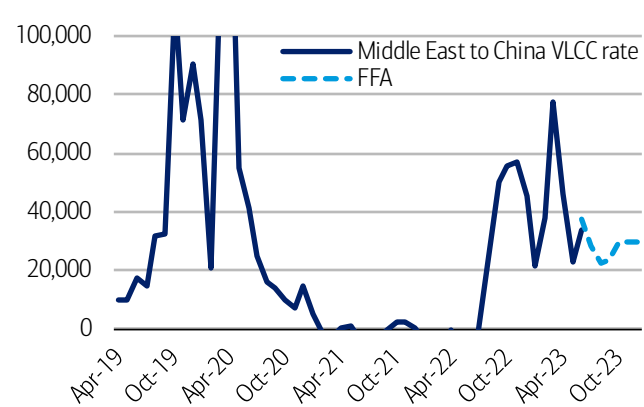
Date	3Q22	4Q22	1Q23	2Q23
VLCC	9,747	42,823	34,498	28,978
Suezmax	50,411	88,602	74,764	54,367
Aframax	46,440	78,728	64,833	49,649
MR	39,878	41,411	29,143	27,680
LR2	33,821	46,192	50,462	52,167
% YoY				
VLCC	-199%	nm	-295%	-234%
Suezmax	-1959%	nm	244%	52%
Aframax	7427%	nm	197%	39%
MR	586%	nm	199%	-18%
LR2	67%	nm	149%	93%
% QoQ				
VLCC	-145%	339%	-19%	-16%
Suezmax	41%	76%	-16%	-27%
Aframax	30%	70%	-18%	-23%
MR	18%	4%	-30%	-5%
LR2	25%	37%	9%	3%

Source: Clarksons

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Exhibit 62: VLCC freight forward agreement rates (US\$/day)

Forward curve at US\$25k/day into 3Q23

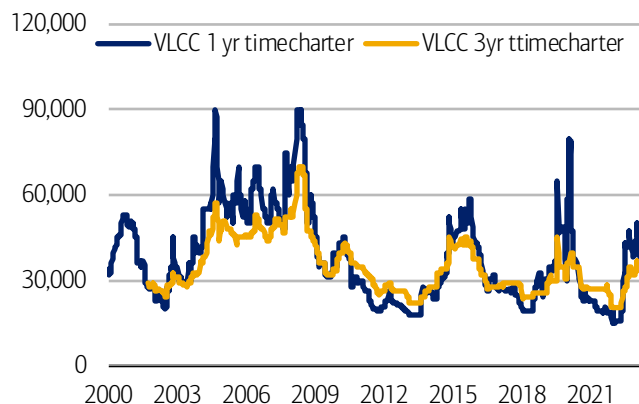


Source: Clarksons, Baltic Exchange

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Exhibit 63: VLCC time charter rates (US\$/day), 2000-23

One year VLCC time charter rates holding around US\$39k per day

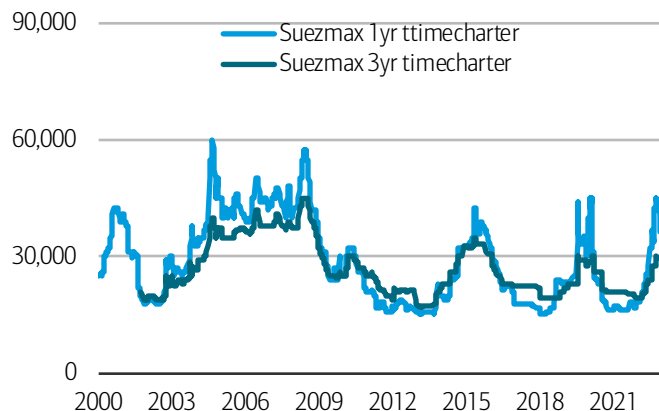


Source: Clarksons

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Exhibit 64: Suezmax time charter rates (US\$/day), 2000-23

One year Suezmax time charter rates around US\$42k per day

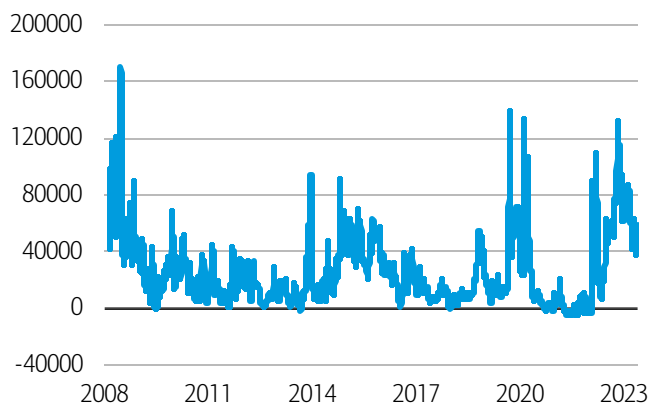


Source: Clarksons

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Exhibit 65: Suezmax freight rates (US\$/day), 2008-23

Baltic Suezmax spot down to below US\$52k per day

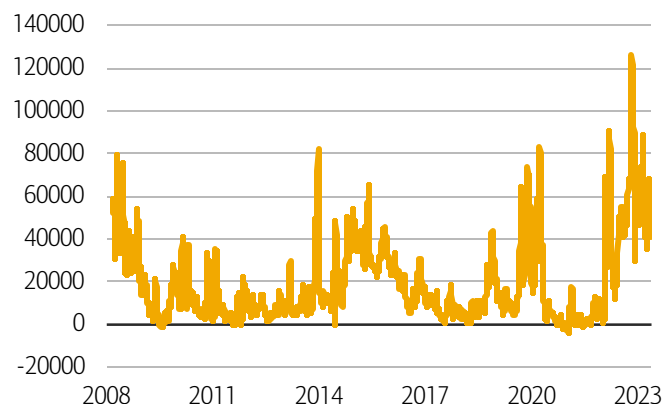


Source: Clarksons

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Exhibit 66: Aframax freight rates (US\$/day), 2008-23

Aframax rates down to US\$41k per day

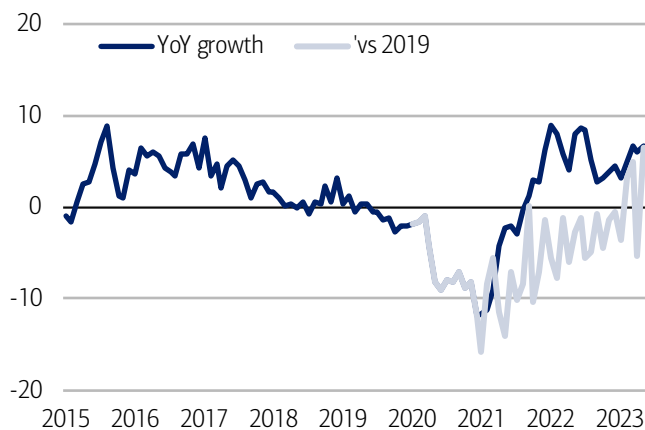


Source: Clarksons

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Crude tanker demand**Exhibit 67: Seaborne crude oil volumes (% YoY), 2015-23**

Seaborne crude tanker volumes recovering to pre COVID levels

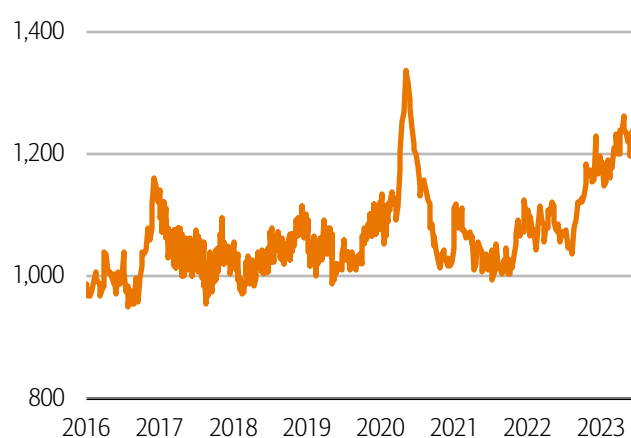


Source: Clarksons

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Exhibit 68: Crude tanker barrels on the water (mn bbl), 2016-23

Crude tanker demand has come off the peaks

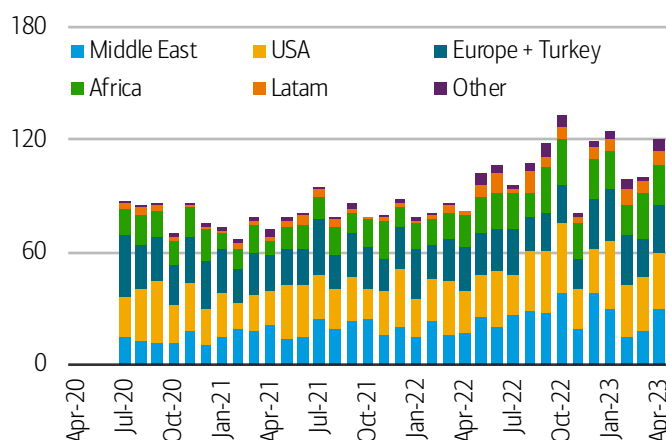


Source: Bloomberg

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Exhibit 69: Western Europe seaborne monthly crude imports from non-Russian producers (mn bbl per month)

European imports from non-Russia back to normal

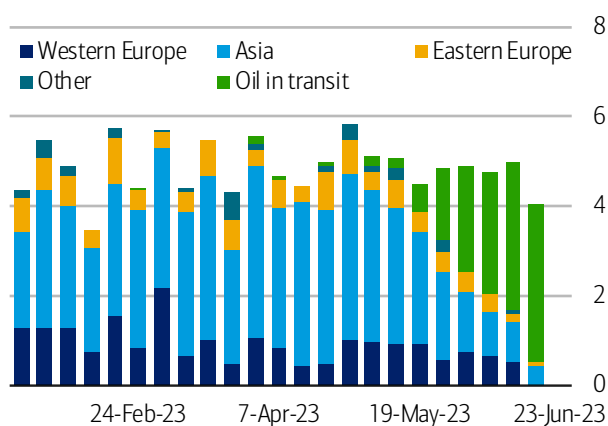


Source: Vortexa

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Exhibit 71: Russian seaborne crude exports (k b/d), 2023

Total Russian crude exports still very robust

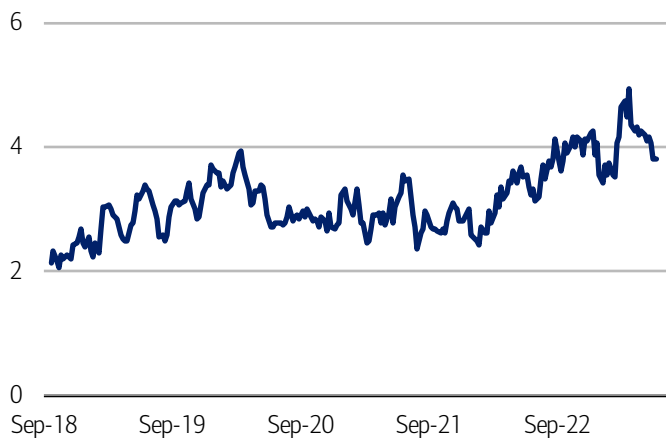


Source: Vortexa

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Exhibit 73: US crude exports (mn b/d) – 4w MA, 2018-23

US crude oil exports down from the peaks of 1Q23

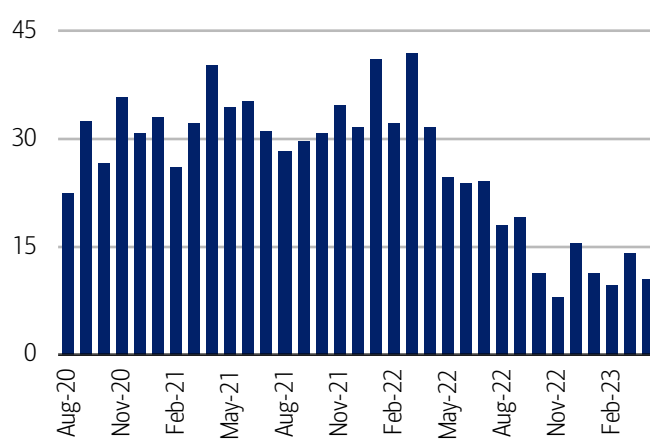


Source: Vortexa

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Exhibit 70: Western Europe seaborne crude imports from Russia (mn bbl per month)

European imports from Russia trending lower

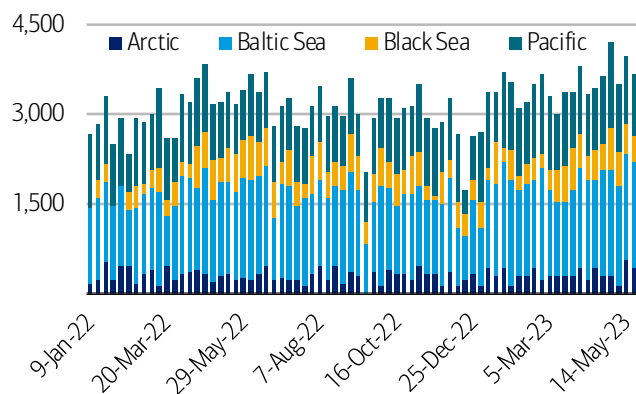


Source: Vortexa

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Exhibit 72: Russian crude by port (k b/d), 2023

Russian exports moving even higher into April-May 2023

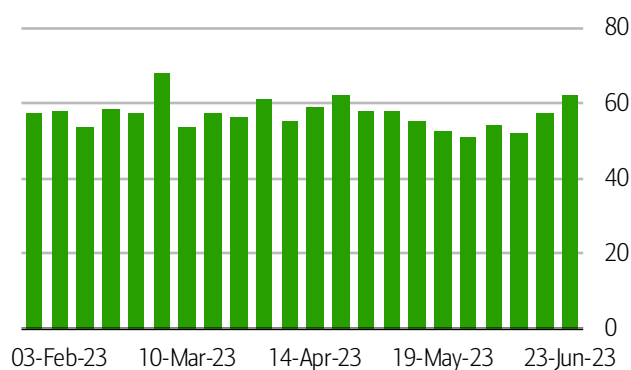


Source: Vortexa

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Exhibit 74: Weekly crude oil exports (mn b/d), 2022-23

Global crude oil exports staying robust

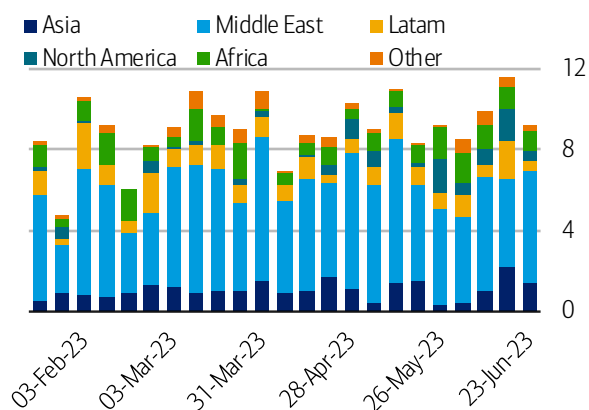


Source: Vortexa

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Exhibit 75: Chinese weekly crude imports (mn b/d), 2022-23

Chinese imports firming into April/May 2023 #



Source: Vortexa

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Tanker supply**Exhibit 77: Crude tanker orderbook as % of fleet, 1996-23**

Crude tanker orderbook to fleet down below 3.0%

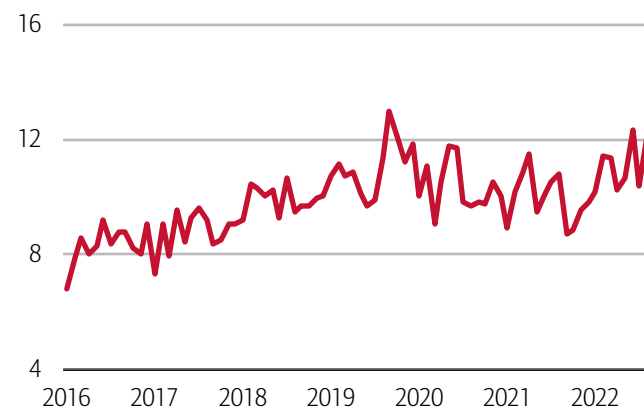


Source: Clarksons

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Exhibit 76: Chinese crude imports (mn b/d)

China crude imports rebounding since March

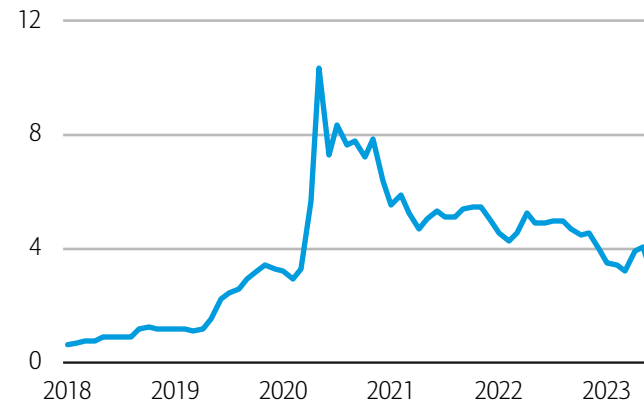


Source: Bloomberg

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Exhibit 78: Crude tanker storage as % of fleet, 2018-23

Tanker storage up to 3.0% of fleet

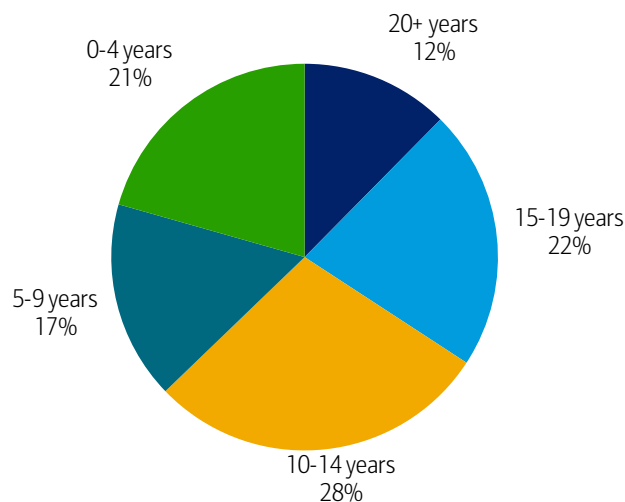


Source: Clarksons

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Exhibit 79: Crude tanker – age distribution, 2023

34% of fleet is older than 15 years

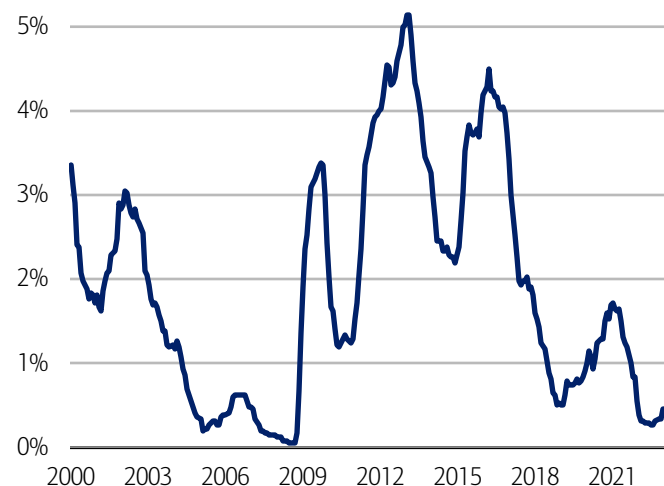


Source: Clarksons

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Exhibit 80: Bulkcarrier scrap rate (%) – 2000-2023

Scrap rate came down and now below 0.5%



Source: Clarksons

BofA GLOBAL RESEARCH

Crude tanker demand & supply**Exhibit 81: Crude tanker demand & supply growth forecasts (% YoY), 2014-25E**

Crude tanker market fundamentals look positive in the years ahead

Crude tanker	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E
Demand Growth	-0.2%	2.9%	4.0%	5.0%	3.4%	1.1%	-6.7%	-3.7%	7.0%	5.6%	3.0%	1.5%
Effective Fleet Growth	0.4%	1.0%	5.9%	5.9%	1.1%	6.0%	0.9%	-0.1%	3.2%	2.6%	0.7%	0.8%
Demand / supply balance	-0.6%	+1.9%	-1.9%	-0.9%	+2.3%	-4.8%	-7.6%	-3.6%	+3.8%	+3.0%	+2.3%	+0.7%
Crude tanker fleet (mn dwt)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Fleet, beginning	340	341	347	368	386	388	417	431	442	446	453	451
New delivery	9	8	21	28	21	28	17	17	9	11	3	5
Scrapping rate	(6)	(1.3)	(1.4)	(9)	(17)	(3)	(3)	(9)	(5)	(4)	(5)	(5)
Others	(2)	(0)	1	(0)	(2)	3	0	4	0	0	0	0
Fleet, Ending, Dwt mn **	341	347	368	386	388	417	431	442	446	453	451	451
Growth	0.4%	2.0%	5.8%	5.1%	0.6%	7.4%	3.3%	2.7%	0.9%	1.4%	-0.4%	0.1%
Floating storage adjustment	0.0%	-1.0%	0.1%	0.8%	0.6%	-1.4%	-2.4%	-2.8%	2.3%	1.2%	1.1%	0.7%
Effective supply growth	0.4%	1.0%	5.9%	5.9%	1.1%	6.0%	0.9%	-0.1%	3.2%	2.6%	0.7%	0.8%
Delivery ratio	58%	72%	59%	91%	68%	91%	100%	87%	90%	100%	100%	100%
Scrapping rate	1.8%	0.4%	0.4%	2.4%	4.4%	0.7%	0.8%	2.1%	1.2%	1.0%	1.0%	1.0%
Gross delivery rate	2.7%	2.5%	6.0%	7.6%	5.4%	7.2%	4.1%	3.9%	2.1%	2.4%	0.6%	1.1%

Source: Clarksons, BofA Global Research estimates

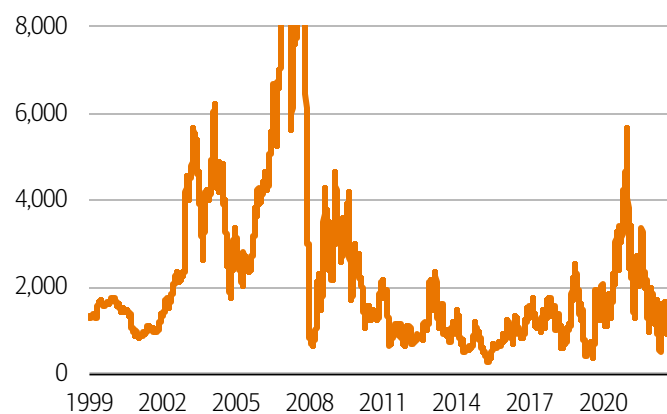
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Dry bulk shipping

Freight rates

Exhibit 82: Baltic Dry Index, 1999-2023

BDI at around 1,200

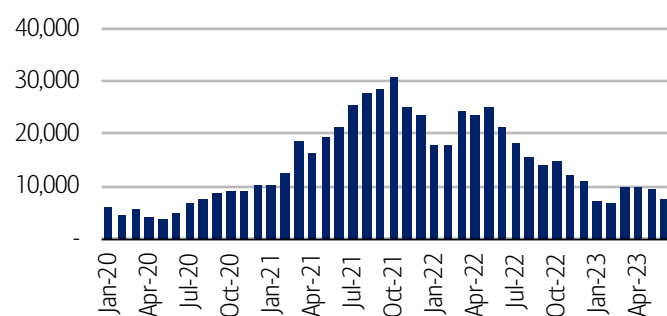


Source: Clarksons

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Exhibit 84: Handysize spot monthly average (US\$/day), 2020-23 #

Spot handysize averaged US\$8.9k/day so far in Jun 2023



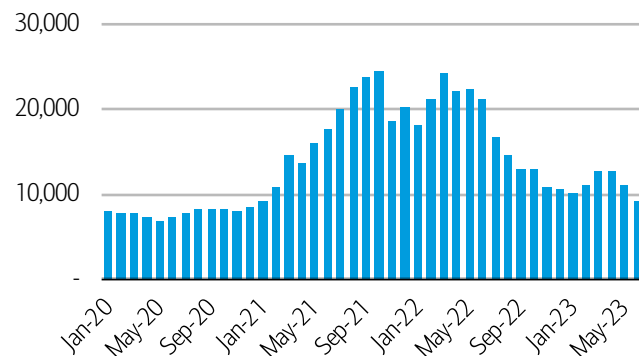
Source: Clarksons, BofA Global Research estimates

Size and commission adjusted to be comparable to PacBasin average handy rates

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Exhibit 86: Handysize 1yr TC monthly average (US\$/day), 2020-23 #

1yr time charter handysize averaged US\$9.2k/day in Jun 2023



Source: Clarksons, BofA Global Research estimates

Size and commission adjusted to be comparable to PacBasin average handy rates

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Exhibit 83: Baltic average rates (US\$/day), 2022-23

Dry bulk quarterly average rates

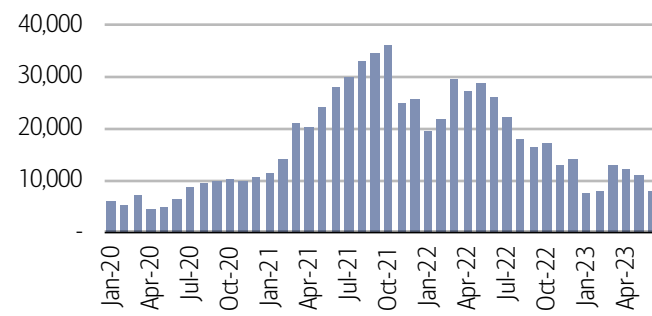
Date	2Q22	3Q22	4Q22	1Q23	2Q23
BDI	2,530	1,870	1,523	1,011	1,506
Capesize	21,599	16,906	14,906	9,144	17,417
Panamax 82	28,901	18,402	16,050	10,169	14,457
Supramax 58	27,566	21,396	14,837	9,702	12,533
Handysize 38	26,618	21,514	15,028	11,326	11,626
% YoY					
BDI	-9%	-50%	-56%	-49%	-40%
Capesize	-31%	-60%	-65%	-38%	-19%
Panamax 82	12%	-45%	-45%	-56%	-50%
Supramax 58	8%	-38%	-51%	-61%	0%
Handysize 38	18%	-33%	-52%	-53%	-56%
% QoQ					
BDI	28%	-26%	-19%	-34%	49%
Capesize	46%	-22%	-12%	-39%	90%
Panamax 82	24%	-36%	-13%	-37%	42%
Supramax 58	10%	-22%	-31%	-35%	29%
Handysize 38	11%	-19%	-30%	-25%	3%

Source: Clarksons

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Exhibit 85: Supramax spot monthly average (US\$/day), 2020-23 *

Spot supramax averaged US\$8.4k/day so far in Jun 2023



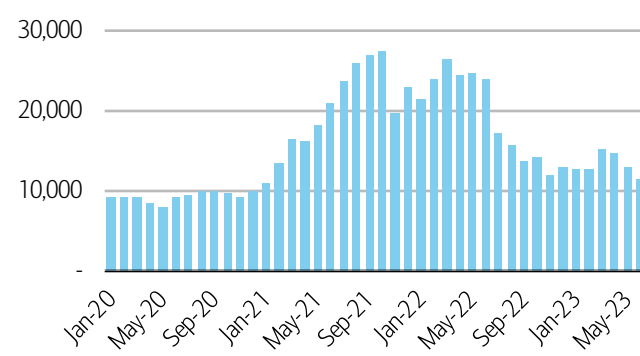
Source: Clarksons, BofA Global Research estimates

* Commission adjusted to be comparable to PacBasin achieved rates

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Exhibit 87: Supramax 1yr TC monthly average (US\$/day), 2020-23 *

1yr time charter supramax averaging US\$11.4k/day in Jun 2023



Source: Clarksons, BofA Global Research estimates

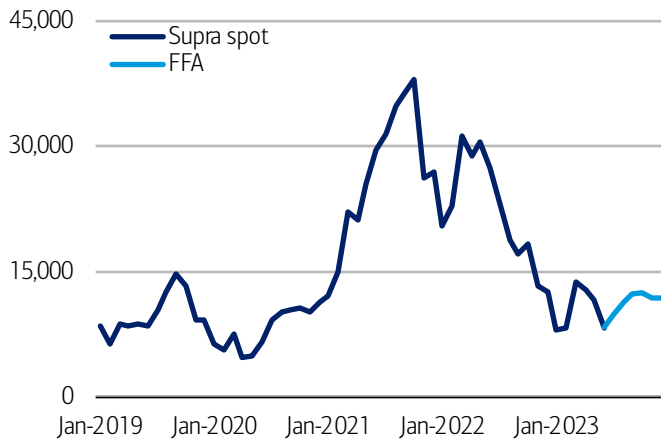
* Commission adjusted to be comparable to PacBasin achieved rates

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Handysize & Supramax FFA outlook

Exhibit 88: Supramax - Freight Forward Agreement, 2019-23

Supra forward curves pointing to healthier rates ahead

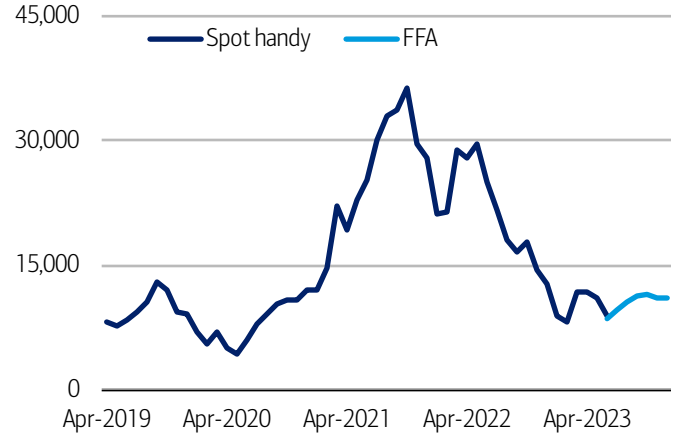


Source: Bloomberg

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Exhibit 89: Handysize - Freight Forward Agreement, 2019-23

Handy forward curves point to a recovery into 2H23



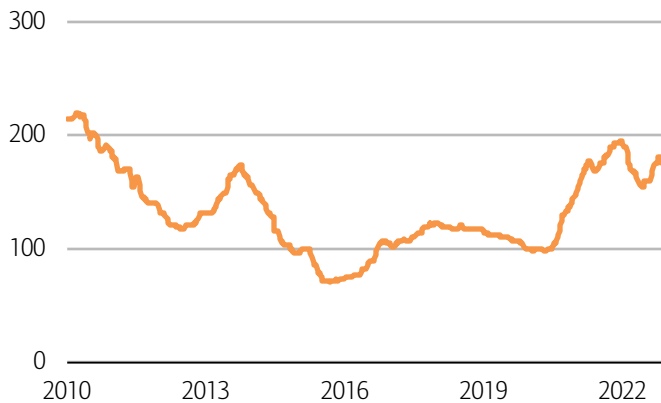
Source: Bloomberg

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Vessel values & port congestion

Exhibit 90: Bulk carrier secondhand vessel price index, 2010-23

Secondhand vessel prices moved off the bottom since March 2023

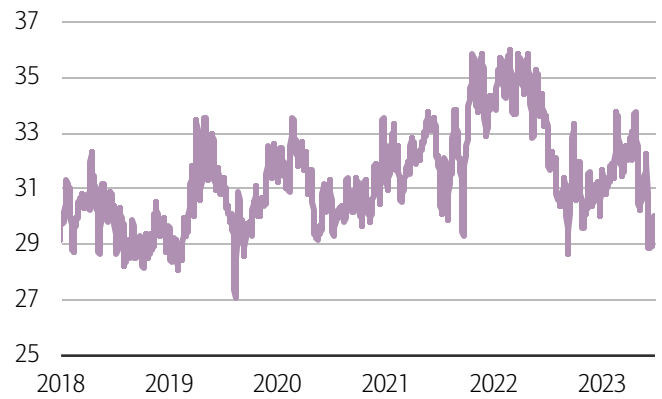


Source: Clarksons

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Exhibit 91: Daily dry bulk fleet at port (anchor or berth) (%)

~30.4% of dry bulk fleet at port



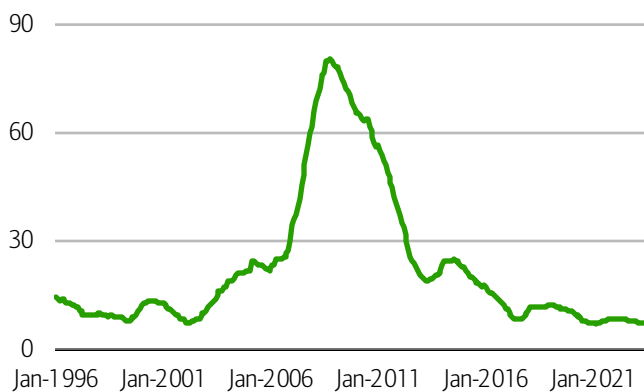
Source: Clarksons

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Vessel supply

Exhibit 92: Dry bulk orderbook to fleet (%), 1996-2023

Orderbook to fleet down to around 7%

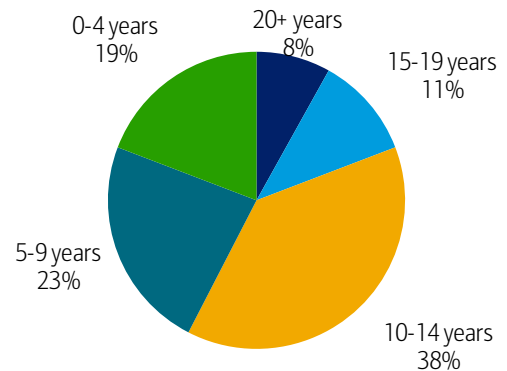


Source: Clarksons

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Exhibit 93: Dry bulk vessel age distribution, 2023

19% of fleet is older than 15 years



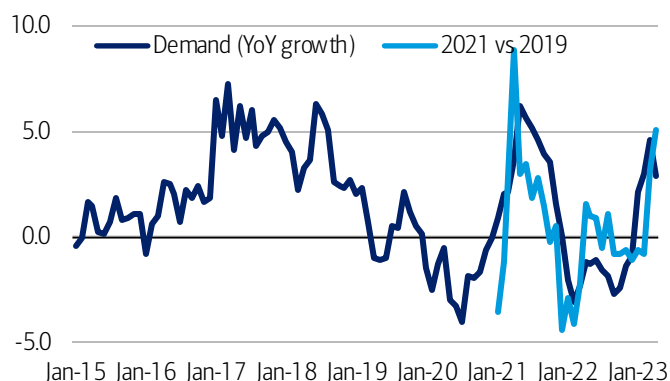
Source: Clarksons

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Dry bulk demand reads

Exhibit 94: Dry bulk demand growth (% YoY), 2015-23

Dry bulk demand above 2019 levels in April 2023

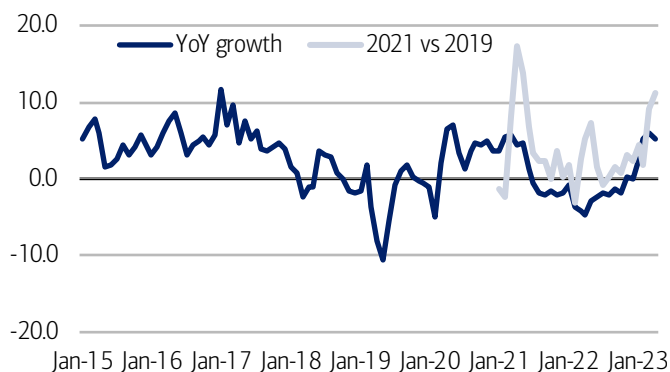


Source: Clarksons

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Exhibit 96: Iron ore demand growth (% YoY), 2015-23

Iron ore demand trending at above 2019 levels in April 2023

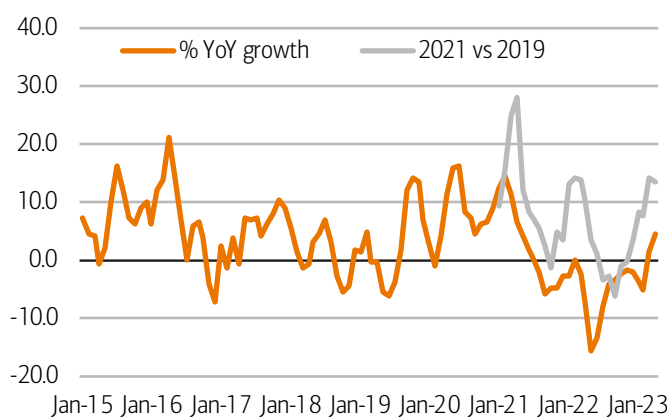


Source: Clarksons

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Exhibit 98: Grain demand growth (% YoY), 2015-23

Grain demand at above 2019 levels in April 2023

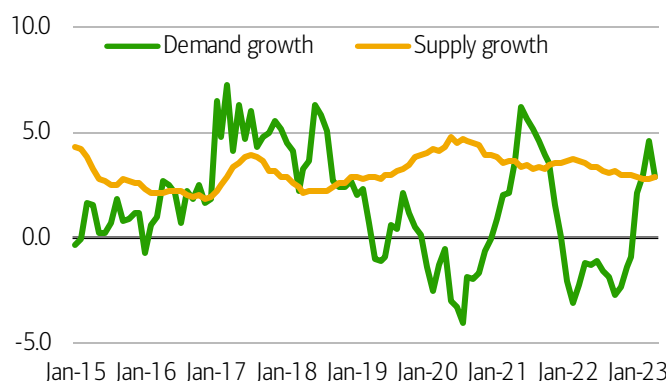


Source: Clarksons

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Exhibit 95: Bulk monthly demand & supply growth (% YoY), 2015-23

Bulk demand growth rebound vs supply growth of +3.0% YoY

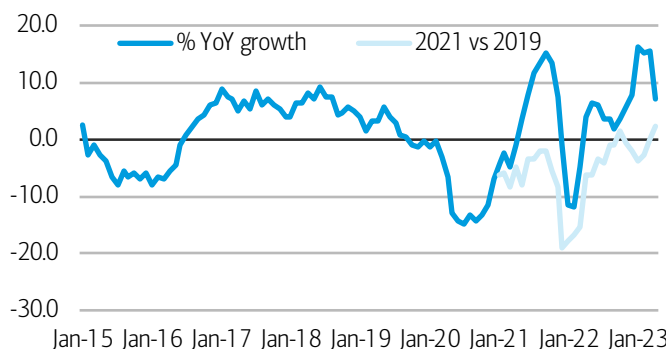


Source: Clarksons

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Exhibit 97: Coal demand growth (% YoY), 2015-23

Coal demand growth trending at above 2019 levels

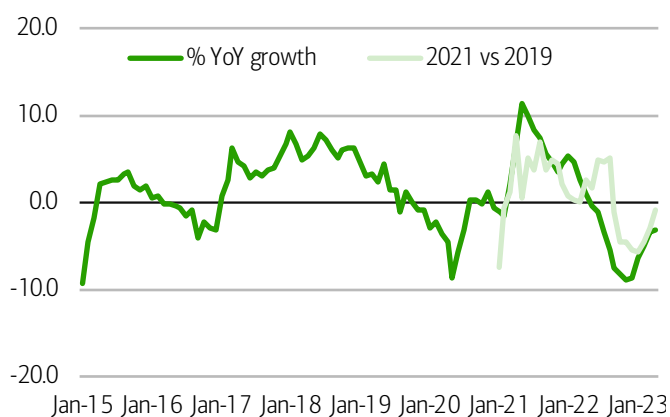


Source: Clarksons

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Exhibit 99: Minor bulk demand growth (% YoY), 2015-23

Minor bulk demand growth trending at 2019 levels in April 2023

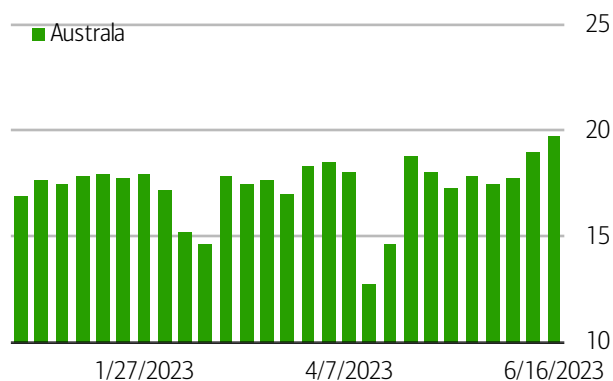


Source: Clarksons

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Exhibit 100: Australia iron ore shipments (mn tn), 2022-23

Australian iron ore exports recovering off cyclone disruptions

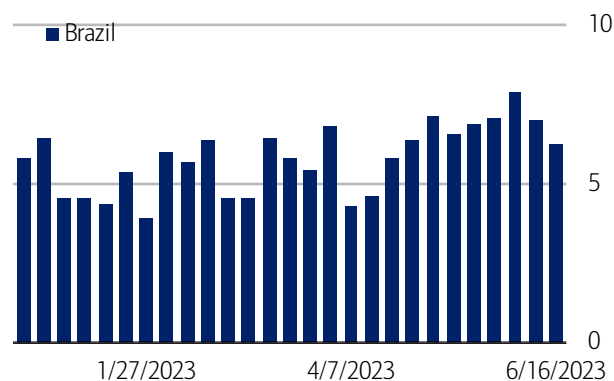


Source: Marcura

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Exhibit 101: Brazil iron ore shipments (mn tn), 2022-23

Brazil iron ore exports trending higher

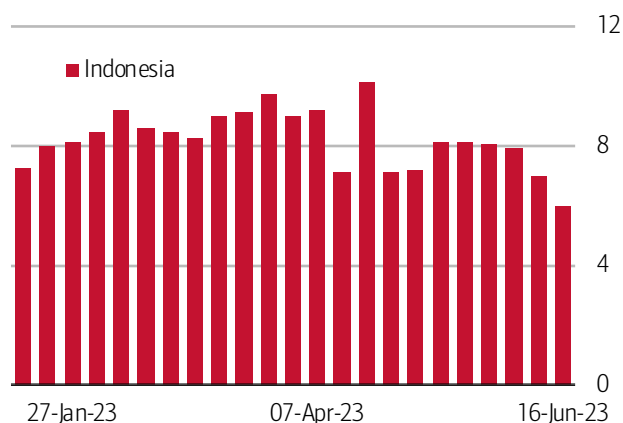


Source: Marcura

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Exhibit 102: Indonesian coal shipments (mn tn), 2022-23

Indonesian exports under some pressure

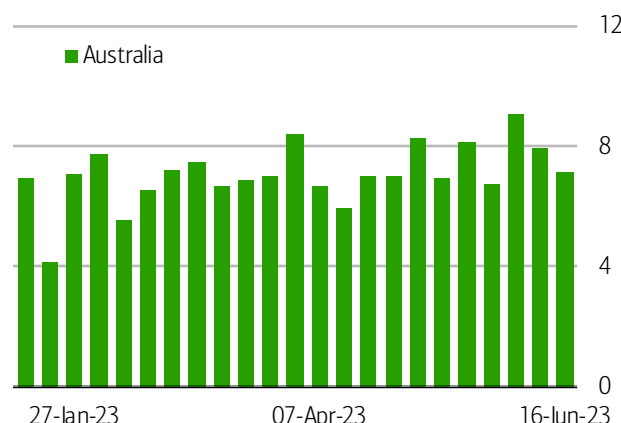


Source: Marcura

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Exhibit 103: Australian coal shipments (mn tn), 2022-23

Aussie coal shipments relatively stable



Source: Marcura

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Dry bulk demand & supply**Exhibit 104: Dry bulk shipping demand & supply growth (% YoY), 2014-25E**

Dry bulk demand/supply outlook

Dry Bulk	2016	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E
Demand	2.3%	3.9%	3.4%	0.7%	0.0%	3.5%	-1.8%	2.5%	2.3%	2.0%
Fleet Growth	2.3%	3.1%	2.7%	3.0%	4.1%	3.9%	2.9%	2.3%	0.9%	1.0%
Demand / Supply Balance	0.0%	0.8%	0.7%	-2.2%	-4.1%	-0.4%	-4.7%	0.2%	1.4%	1.0%
Dry Bulk Fleet, Dwt mn	2016	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E
Fleet, beginning	780	798	823	845	879	916	949	976	999	1,009
New delivery	47	38	28	41	49	38	32	34	26	23
Demolition	(29)	(15)	(4)	(8)	(15)	(5)	(4)	(11)	(17)	(13)
Others	(0)	1	(1)	0	3	-	-	-	-	-
Fleet, Ending, Dwt mn	798	823	845	879	916	949	976	999	1,009	1,019
Growth	2.3%	3.1%	2.7%	4.0%	4.2%	3.6%	2.9%	2.3%	0.9%	1.0%
Adjustment factor				-1.0%	-0.1%	0.3%	0.0%	0.0%	0.0%	0.0%
Adjusted fleet growth				3.0%	4.1%	3.9%	2.9%	2.3%	0.9%	1.0%
Gross delivery rate	6.1%	4.8%	3.4%	4.9%	5.6%	4.2%	3.3%	3.4%	2.6%	2.3%
Scrapping Rate	3.7%	1.8%	0.5%	0.9%	1.8%	0.6%	0.4%	1.1%	1.7%	1.3%

Source: BofA Global Research, Clarksons

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Methodology explained

Readers should be aware that although the BAC datasets utilized in our analysis represent a significant number of data points, they nevertheless present a degree of selection bias, including but not limited to income levels and geographies. In addition, the data is limited to debit and credit cards and does not include other payment methods such as cash or checks.

Data regarding merchants who receive payments are identified and classified by the Merchant Categorization Code (MCC) defined by financial services companies. The data are mapped using proprietary methods from the MCCs to the North American Industry Classification System (NAICS), which is also used by the Census Bureau, in order to classify spending data by subsector. Spending data may also be classified by other proprietary methods not using MCCs.

BAC data used in this report include spending from active US households (HHs) only. Spending from corporate cards are excluded.

Our methodology for calculating the growth rates for daily data: we calculate the %y/y growth rate and the 4-year % change by matching calendar days (Jan 1 2023 is matched to Jan 1 2022, and Jan 1, 2019, respectively). The % change is calculated based on the 7-day moving average of spending levels.

Unless otherwise noted, the monthly subsector data are adjusted to control for seasonality and other factors.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R1}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R1} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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