

Shipping - Global

Shipping & supply chain high frequency tracker #56

Industry Overview

Tracking the high frequency shipping data

This report contains our favorite charts to track shipping & supply chains. Red Sea disruptions are rising with container diversions persisting and rising diversions from bulk and tanker in response to rising insurance costs. Container disruption looks set to peak in the coming month with more upside to spot rates before a gradual fade. Bulker rates are under pressure from seasonal headwinds more than offsetting Red Sea disruption, while crude tanker rates look near term supported by demand with upside from Red Sea.

Red Sea: Container disrupted, bulk/tanker diversion rising

Red Sea vessel transits are currently half of 1H December with container seeing the biggest diversions with current transits only 10% of 1H December. The data shows bulkers and tankers are starting to divert with Red Sea transits at 70-80% of 1H Dec levels in the past week given higher insurance. Bulk and tanker could see more diversion given the threat of Houthi retaliation after Operation Prosperity Guardian attacks last week – although for container we've probably passed peak disruption with the strikes on Yemen a possible early step towards reducing the Houthi menace.

Container: Spot rates soar, more upside in coming weeks

Container average spot rates are up ~120% since 1 December with Asia-Europe spot rates up 265%. Spot rates should move higher in the coming month as the pre-Chinese New Year ("CNY") demand mini-peak coinciding with peak Red Sea supply disruptions (tighter box supply and vessel export capacity in late Jan-early Feb as ships return late). We see peak disruption in Jan-Feb 2024 before a gradual unwind helped by post CNY demand lull, new deliveries and easing temporary supply disruption.

Tanker: Demand tailwinds to offset OPEC+ cuts

VLCC tanker forward curves suggest rates holding at US\$35-40k/day through 1Q24. 1Q24 demand should be supported by Chinese import/export quotas and stricter Russian sanction enforcement boosting legal market volumes. But watch headwinds from OPEC+ production cuts and Nigeria's Dangote refinery starting production.

Bulker: Seasonal headwinds loom in coming months

Bulk freight rates face seasonal pressure into 1Q24 as the CNY period coincides with cyclone weather in the southern hemisphere. Forward curves suggest downside to spot particularly for capes at US\$-9k/day downside from now to February, while supramax downside looks more limited at US\$-2k/day downside from now to February.

Car carrier: Tight market with possible Red Sea boost

We estimate 15-20% of seaborne car carrier trade volumes were via the Red Sea in 2023. But car carrier has been less disrupted by Red Sea relative to container for now - with 65% of car carrier capacity still using the Red Sea in the past week.

15 January 2024

Equity
Global
Shipping

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Abbreviations

CNY: Chinese New Year

VLCC: Very Large Crude Carrier

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Refer to important disclosures on page 27 to 29.

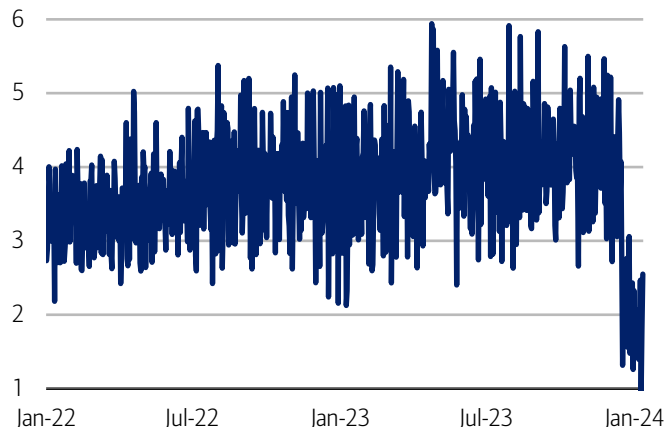
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Timestamp: 15 January 2024 07:07AM EST

Red Sea disruptions

Exhibit 1: Red Sea weekly total vessel arrivals (mn GT), 2022-24

Containers and car carriers are now 20% and 10% of 1H of December level

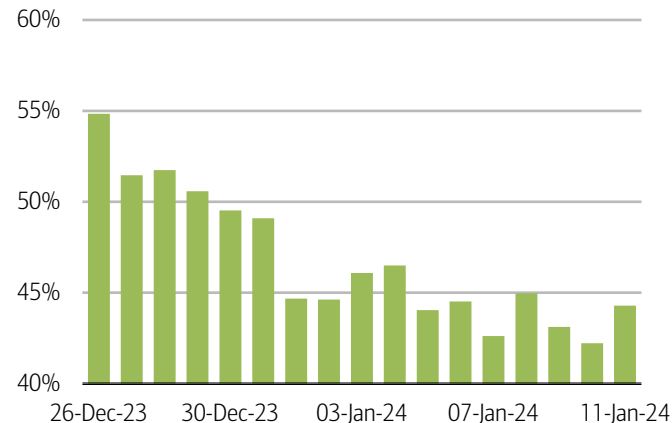


Source: Clarksons

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Exhibit 2: Red Sea total vessel arrivals vs 1H Dec levels (%), 7D MA

Overall arrivals are less than half of 1H of December level

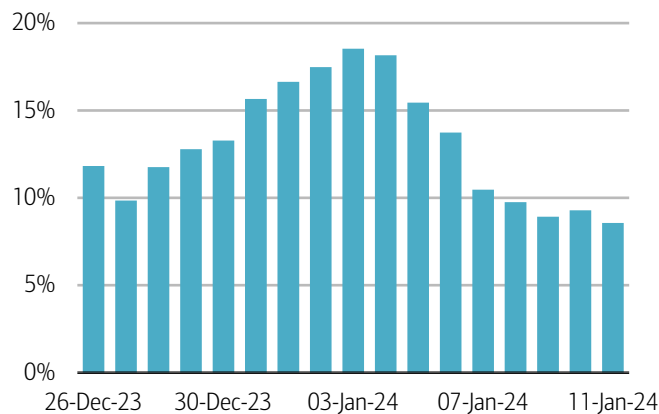


Source: Clarksons

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Exhibit 3: Container ship Red Sea arrivals vs 1H Dec levels (%), 7D MA

Containers ship arrivals are less than 10% of 1H of December level

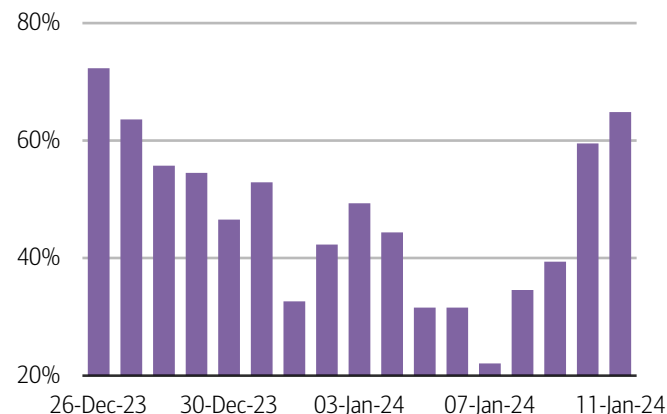


Source: Clarksons

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Exhibit 4: Car carrier Red Sea arrivals vs 1H Dec levels (%), 7D MA

Made some recovery but still around 60% of 1H of December level

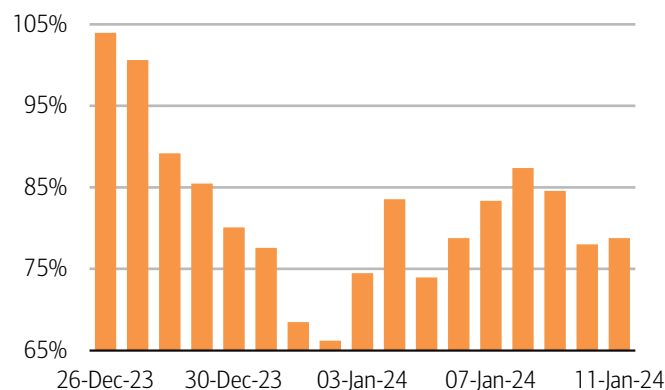


Source: Clarksons

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Exhibit 5: Tanker Red Sea vessel arrivals vs 1H Dec levels (%), 7D MA

Tankers remain 80% of 1H of December level

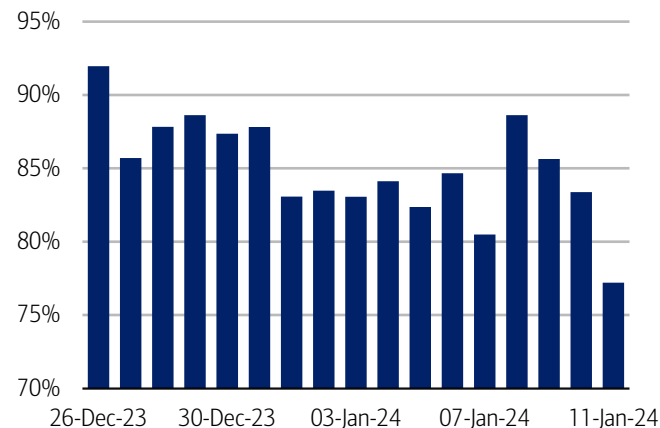


Source: Clarksons

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Exhibit 6: Bulker Red Sea arrivals vs 1H Dec levels (%), 7D MA

Bulk ships arrival declined and now below 80% of 1H of December level



Source: Clarksons

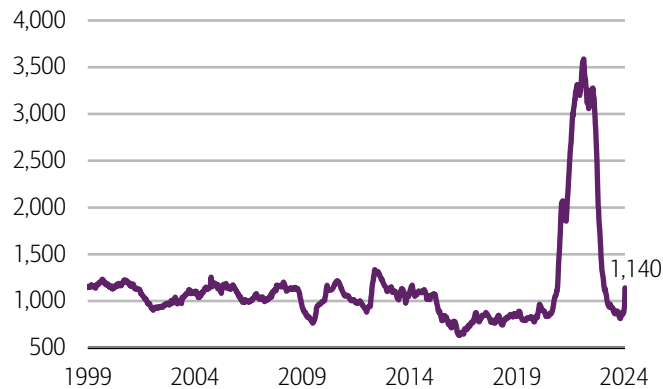
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Container shipping

Blended freight rates

Exhibit 7: China Containerized Freight Index (CCFI), 1999-2024

WoW: +22% MoM: +31% YoY: -5% vs2019: +33%



Source: Shanghai Shipping Exchange

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Exhibit 8: CCFI quarterly average, 2023-24

CCFI trending down YoY but up QoQ in 1Q24

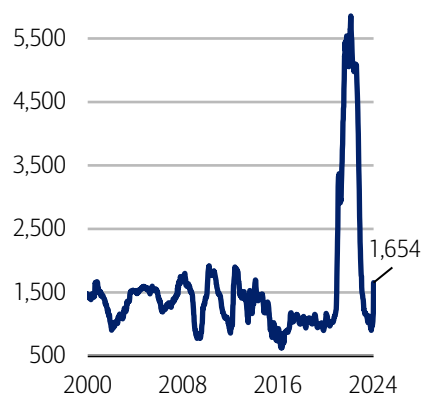
CCFI	1Q23	2Q23	3Q23	4Q23	1Q24
CCFI	1,087	938	876	854	1,039
CCFI Europe	1,411	1,154	1,059	985	1,417
CCFI USWC	789	707	733	725	760
CCFI USEC	1,161	886	870	839	948
% YoY					
CCFI	-68%	-70%	-70%	-47%	-4%
CCFI Europe	-74%	-77%	-78%	-61%	0%
CCFI USWC	-70%	-72%	-69%	-33%	-4%
CCFI USEC	-57%	-68%	-69%	-52%	-18%
% QoQ					
CCFI	-33%	-14%	-7%	-2.5%	21.7%
CCFI Europe	-44%	-18%	-8%	-7%	44%
CCFI USWC	-27%	-10%	4%	-1%	5%
CCFI USEC	-34%	-24%	-2%	-4%	13%

Source: Shanghai Shipping Exchange

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Exhibit 9: CCFI Europe, 2000-24

MoM: +62% YoY: +4% vs 2019: +49%

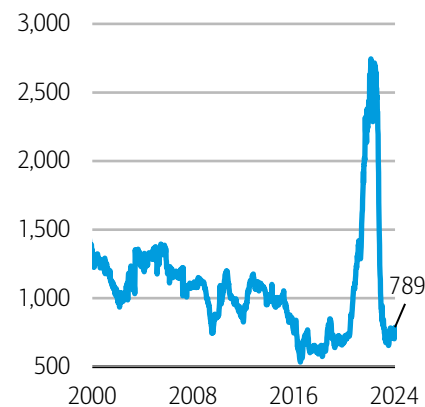


Source: Shanghai Shipping Exchange

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Exhibit 10: CCFI US West Coast, 2000-24

MoM: +10% YoY: -4% vs 2019: +12%

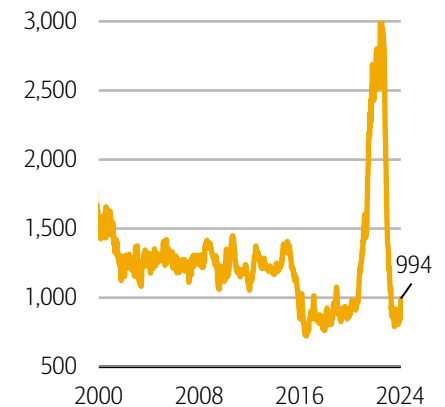


Source: Shanghai Shipping Exchange

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Exhibit 11: CCFI US East Coast, 2000-24

MoM: +18% YoY: -25% vs 2019: +13%

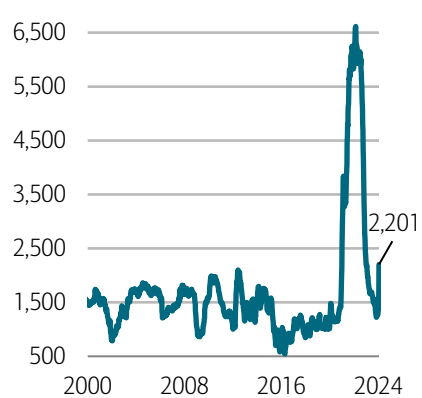


Source: Shanghai Shipping Exchange

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Exhibit 12: CCFI Mediterranean, 2000-24

MoM: +68% YoY: +1% vs 2019: +95%

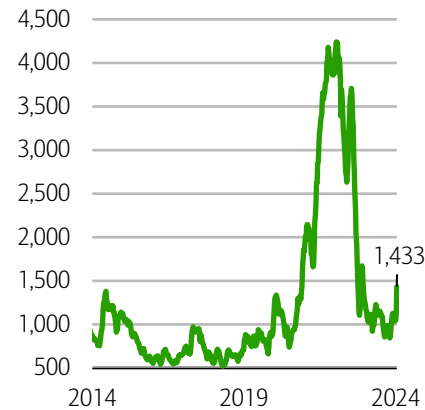


Source: Shanghai Shipping Exchange

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Exhibit 13: CCFI Middle East, 2014-24

MoM: +38% YoY: +24% vs 2019: +74%

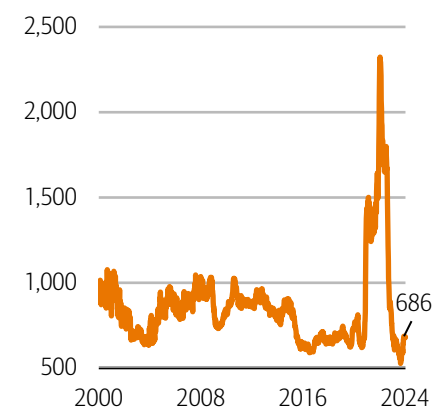


Source: Shanghai Shipping Exchange

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Exhibit 14: CCFI Singapore, 2000-24

MoM: -0% YoY: +1% vs 2019: -4%



Source: Shanghai Shipping Exchange

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Spot freight rates

Exhibit 15: Shanghai Containerized Freight Index (SCFI), 2010-24

WoW: +16% MoM: +102% YoY: +114% vs 2019: +135%



Source: Shanghai Shipping Exchange

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Exhibit 16: SCFI quarterly average, 2023-24

SCFI trending up in 1Q24

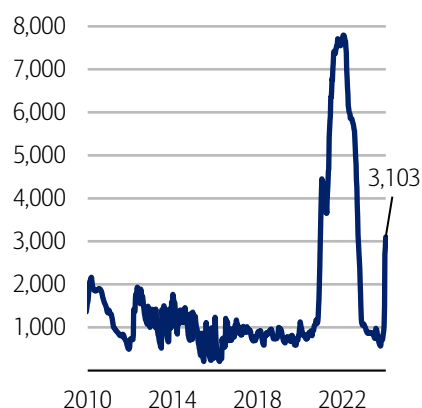
SCFI	1Q23	2Q23	3Q23	4Q23	1Q24
SCFI	969	983	986	1,089	2,051
SCFI Europe	926	848	776	989	2,987
SCFI USWC	1,265	1,419	1,884	1,851	3,375
SCFI USEC	2,438	2,366	2,768	2,540	4,872
% YoY					
SCFI	-80%	-77%	-70%	-21%	112%
SCFI Europe	-88%	-86%	-83%	-34%	222%
SCFI USWC	-84%	-82%	-64%	14%	167%
SCFI USEC	-78%	-77%	-68%	-38%	100%
% QoQ					
SCFI	-30%	2%	0%	10%	88%
SCFI Europe	-38%	-8%	-9%	28%	202%
SCFI USWC	-22%	12%	33%	-2%	82%
SCFI USEC	-41%	-3%	17%	-8%	92%

Source: Shanghai Shipping Exchange

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Exhibit 17: SCFI Europe, 2010-24 (\$/TEU)

MoM: +202% YoY: +204% vs 2019: +217%

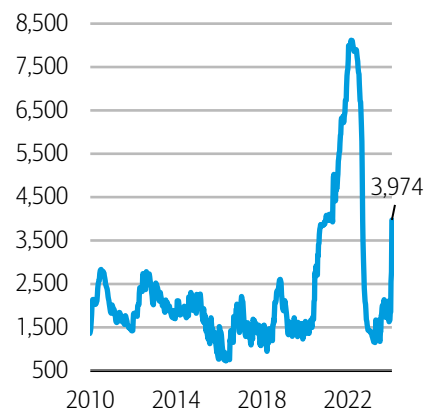


Source: Shanghai Shipping Exchange. \$=USD

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Exhibit 18: SCFI USWC, 2010-24 (\$/FEU)

MoM: +119% YoY: +188% vs 2019: +110%

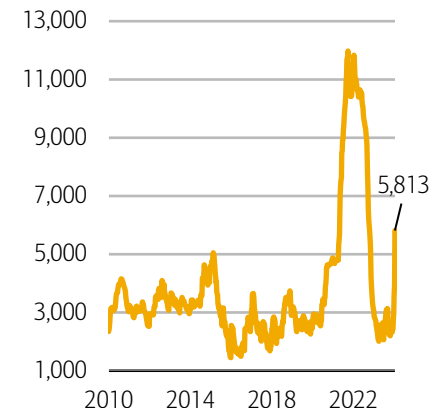


Source: Shanghai Shipping Exchange. \$=USD

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Exhibit 19: SCFI USEC, 2010-24 (\$/FEU)

MoM: +107% YoY: +106% vs 2019: +91%

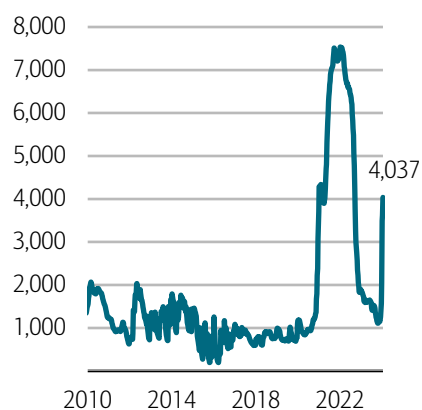


Source: Shanghai Shipping Exchange. \$=USD

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Exhibit 20: SCFI Med, 2010-24 (\$/TEU)

MoM: +157% YoY: +120% vs 2019: +312%

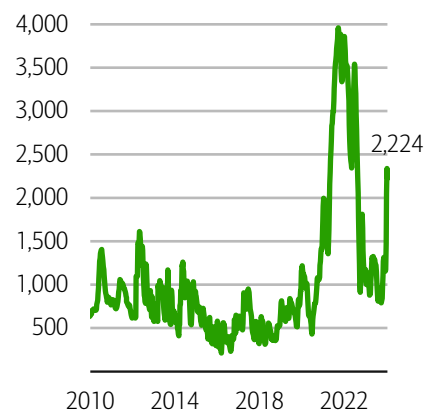


Source: Shanghai Shipping Exchange. \$=USD

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Exhibit 21: SCFI Middle East, 2010-24 (\$/TEU)

MoM: +89% YoY: +122% vs 2019: +173%

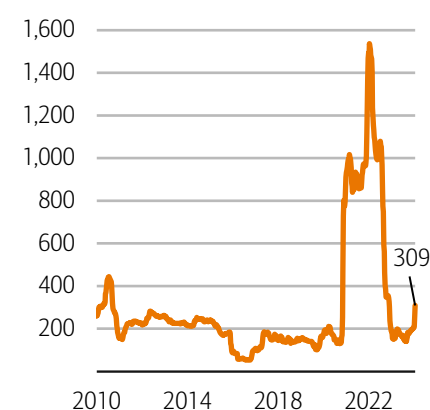


Source: Shanghai Shipping Exchange. \$=USD

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Exhibit 22: SCFI Singapore, 2010-24 (\$/TEU)

MoM: +53% YoY: +101% vs 2019: +102%



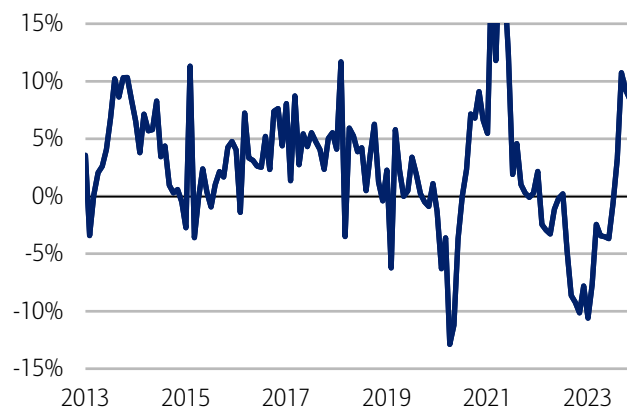
Source: Shanghai Shipping Exchange. \$=USD

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World trade trends

Exhibit 23: Global container volume growth (YoY %), 2013-23

World container trade up just below 10% YoY in past two months

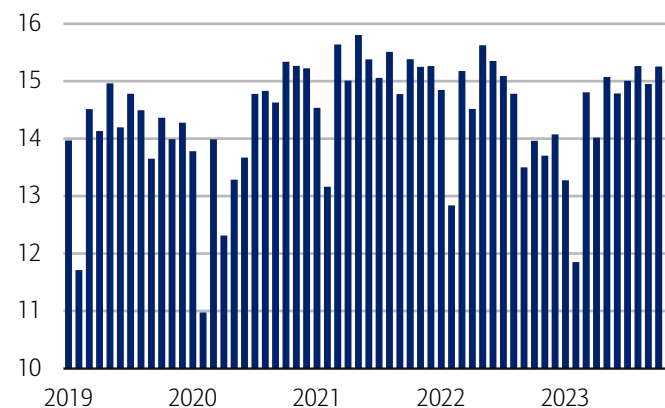


Source: Bloomberg

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Exhibit 24: Global monthly container volumes (mn TEU), 2019-23

World trade has been firm since spring 2023

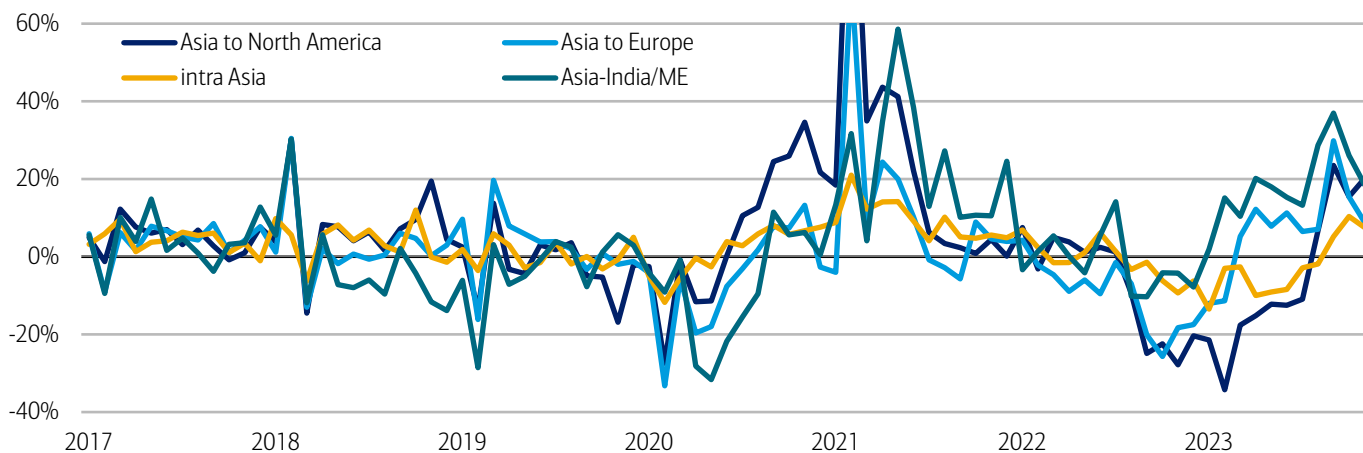


Source: Bloomberg

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Exhibit 25: Container volumes by route (% YoY), 2017-23

Key trade lane volumes still seeing positive YoY growth



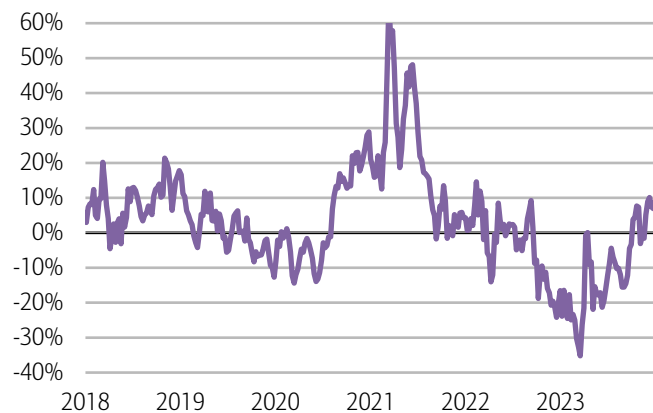
Source: Bloomberg

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US high frequency container volumes

Exhibit 26: US weekly container imports 4w MA (% YoY), 2018-23

US weekly imports trending up and moved back to positive since November

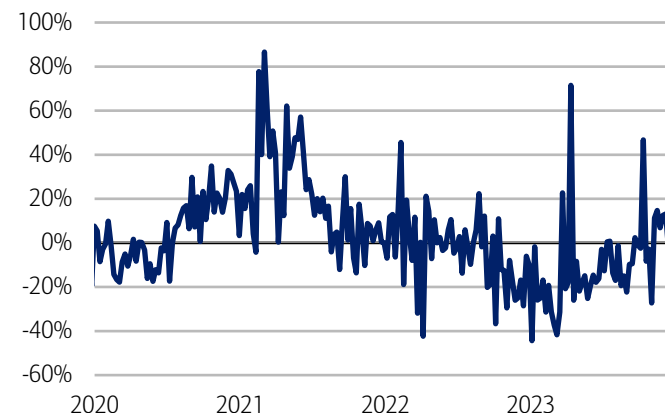


Source: Bloomberg

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Exhibit 27: US weekly container imports (% YoY), 2020-23

US weekly imports remain positive YoY since November

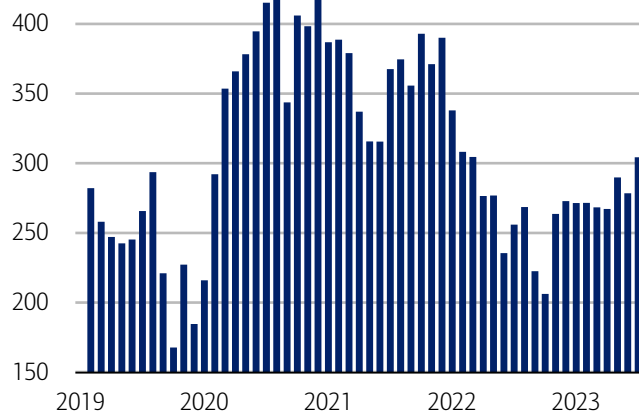


Source: Bloomberg

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Exhibit 28: US furniture monthly imports (TEU), 2019-23

US furniture imports slightly below 304k TEU /month

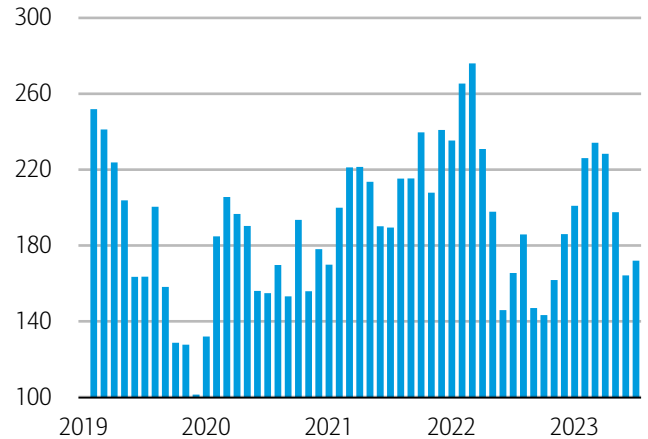


Source: Bloomberg

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Exhibit 29: US apparel & footwear monthly imports (TEU), 2019-23

US apparel & footwear imports just below 172k TEU / month

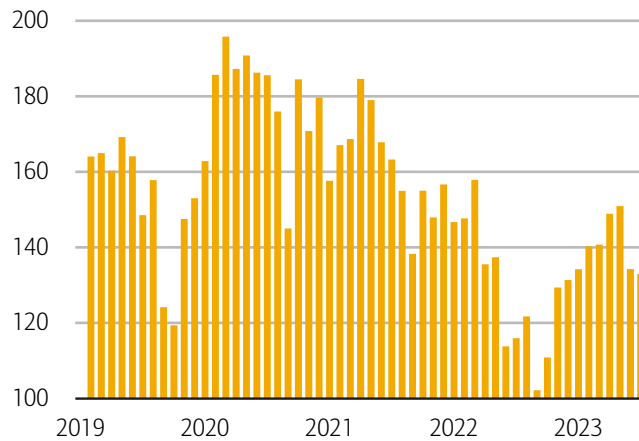


Source: Bloomberg

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Exhibit 30: US electronic monthly imports (TEU), 2019-23

US electronics imports trending around 133k TEU /month

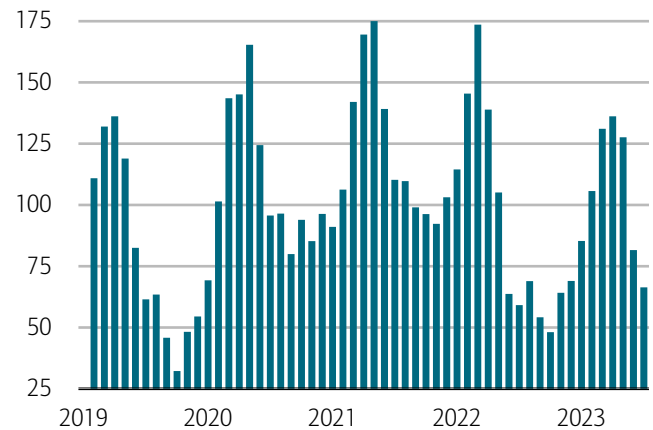


Source: Bloomberg

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Exhibit 31: US toy & leisure monthly imports (TEU), 2019-23

US toy & leisure imports slightly above 66k TEU



Source: Bloomberg

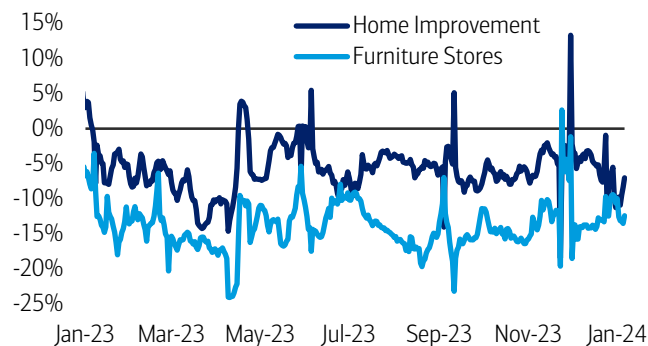
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US consumer reads

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

Exhibit 32: 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 remained negative on a y/y basis in the week ending Jan 6

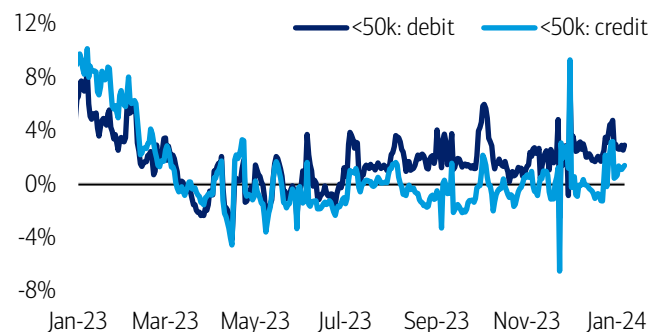


Source: BAC internal data

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Exhibit 34: Total credit card and total debit card spending per HH for lower-income group (y/y % change of the 7-day ma of spending levels)

Lower-income debit card spending growth significantly outpaced credit card spending growth on a y/y basis in the week ending Jan 6



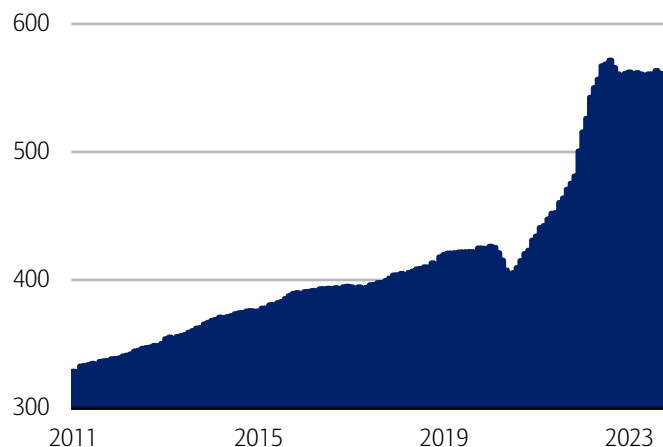
Source: BAC internal data

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US retail inventory levels

Exhibit 36: US retail (ex-auto) inventories (US\$bn), 2011-23

Retail inventories have been stable, still well above pre-COVID levels

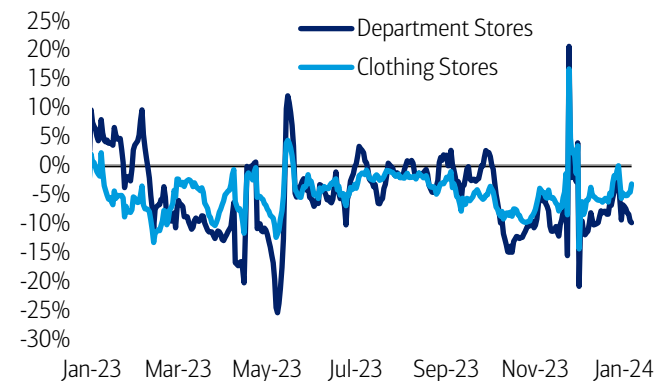


Source: Bloomberg

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Exhibit 33: 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 was largely negative in 2023



Source: BAC internal data

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Exhibit 35: Aggregated monthly card spending per HH by major category (%m/m, SA)

Card spending was weak in furniture and clothing in December

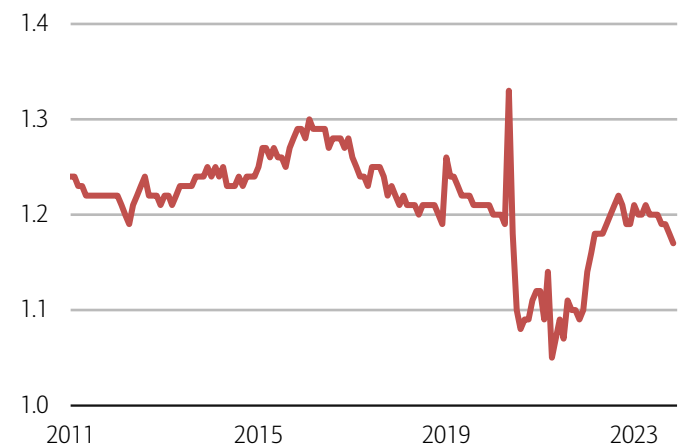
	Dec-23	Nov-23	Oct-23	Sep-23	Aug-23	Jul-23
Gas	1.0%	-3.9%	-3.1%	2.8%	5.9%	1.4%
Furniture	-4.3%	3.1%	-1.3%	-1.2%	-2.3%	-2.7%
Home improvement	-0.9%	-0.2%	0.5%	-1.3%	-1.0%	-0.1%
Clothing	-2.0%	2.4%	-1.7%	-1.3%	-1.8%	0.8%
Grocery	-0.1%	-0.4%	0.9%	-0.2%	0.1%	-0.3%
General Merchandise	0.2%	0.1%	0.3%	0.1%	-0.4%	0.8%
Department Store	-0.9%	1.3%	-1.3%	0.1%	-2.9%	0.3%
Restaurants	0.4%	0.4%	0.5%	0.1%	-0.4%	0.5%
Lodging	0.6%	0.0%	0.0%	-0.2%	-0.7%	-1.6%
Airlines	0.8%	2.9%	-2.9%	-1.1%	-1.3%	1.1%
Total online retail (card not present)	0.1%	-0.2%	-0.3%	0.9%	-0.6%	1.6%

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

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Exhibit 37: US retail (ex-auto) inventory to sales ratio, 2011-23

Retail adjusted inventories to sales just below 1.2x back to historical average

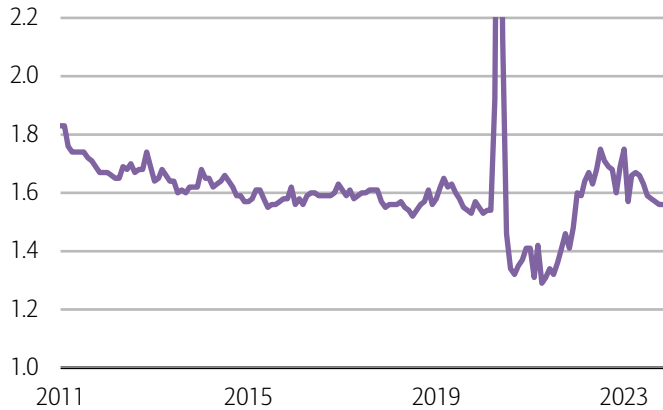


Source: Bloomberg

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Exhibit 38: Furniture – adjusted inventory to sales, 2011-23

Furniture inventory-to-sale closer to historical range

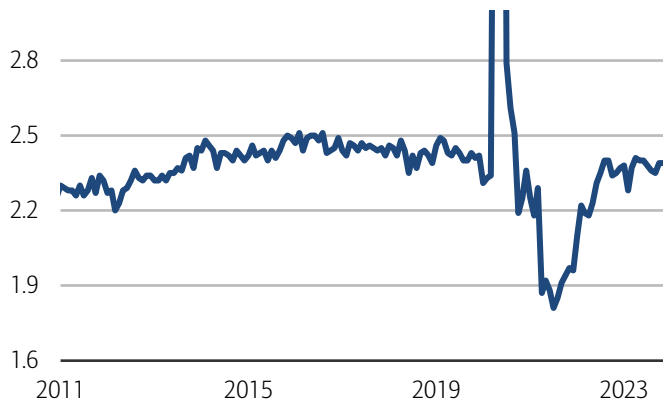


Source: Bloomberg

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Exhibit 40: Clothing – adjusted inventory to sales, 2011-23

Clothing inventory to sales returning to historical range

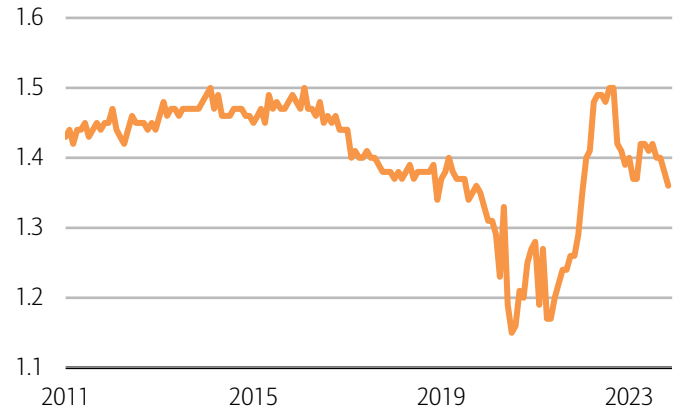


Source: Bloomberg

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Exhibit 39: General merchandise – adjusted inventory to sales, 2011-23

General merchandise inventory-to-sales returned to pre-COVID level

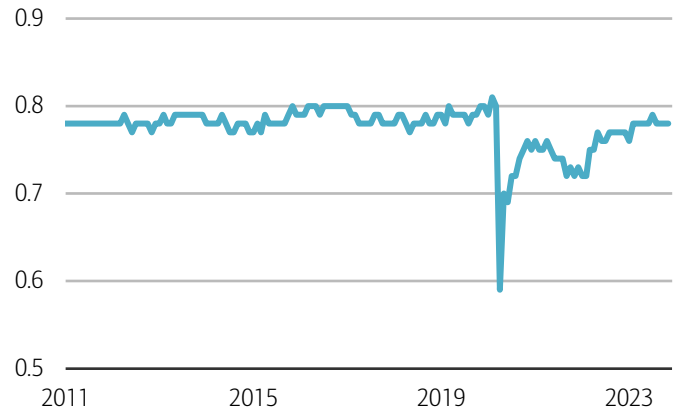


Source: Bloomberg

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Exhibit 41: Food & Beverage – adjusted inventory to sales, 2011-23

Food & beverage inventory to sales still slightly below historical level

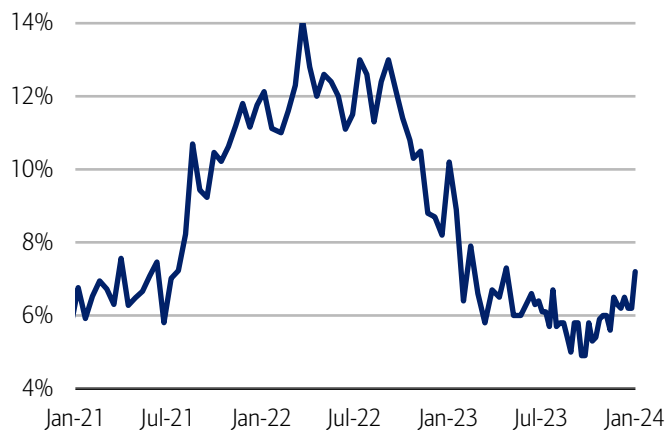


Source: Bloomberg

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Idling & port congestion**Exhibit 42: Global port congestion - % of fleet, 2021-24**

Port congestion slightly up but still around 7%

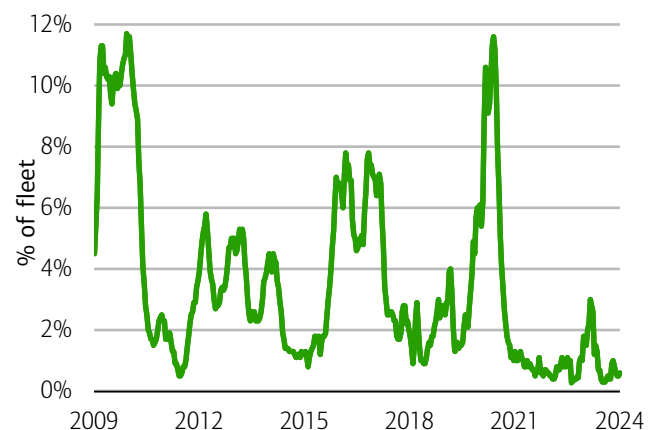


Source: Linerlytica

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Exhibit 43: Global container vessel idling rate (%), 2009-24

Idling rate well below 1% of the fleet



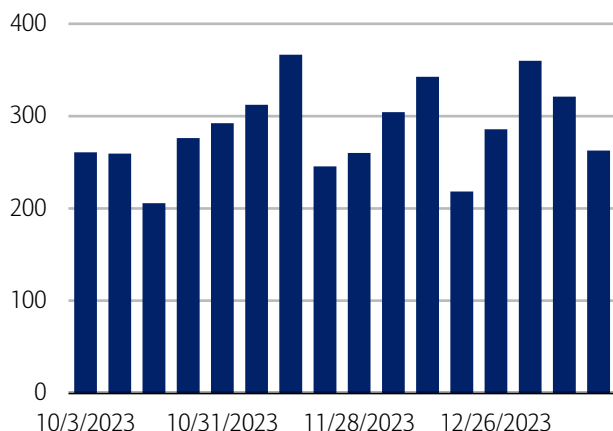
Source: Linerlytica, Alphaliner

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Weekly sailing capacity on key routes

Exhibit 44: Weekly vessel capacity, Asia to North EU (k TEU), 2023-24

Weekly capacity trending down

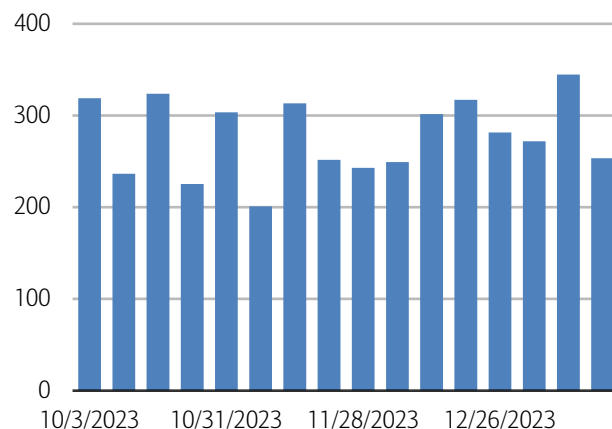


Source: Linerlytica

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Exhibit 45: Weekly vessel capacity, Asia to USWC (k TEU), 2023-24

Capacity decline in early January



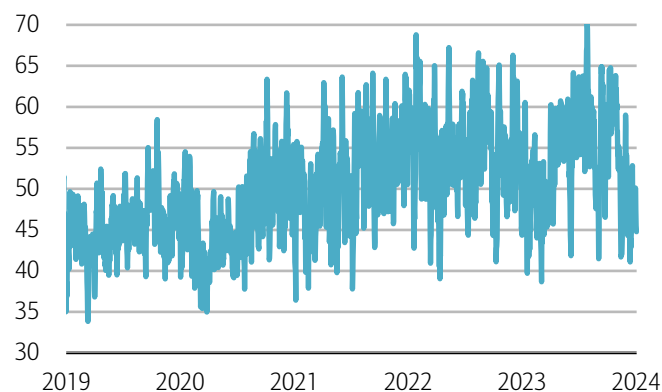
Source: Linerlytica

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Panama Canal congestion

Exhibit 46: Panama Canal containership transit 7day MA (k TEU/day)

Transit slowly coming down in November and currently just above 50k

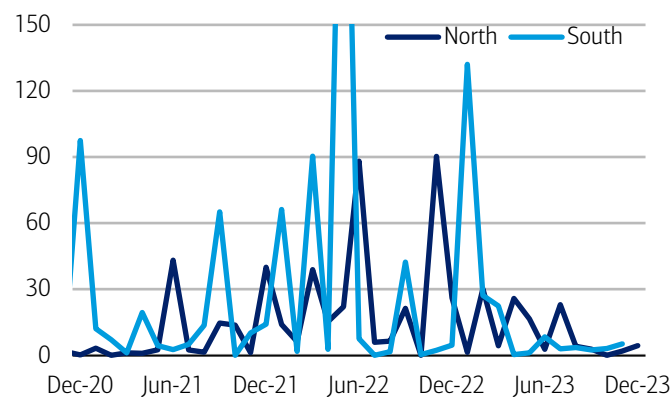


Source: Clarksons

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Exhibit 47: Panama Canal unscheduled container waiting time (hours)

No wait for unscheduled and scheduled ships



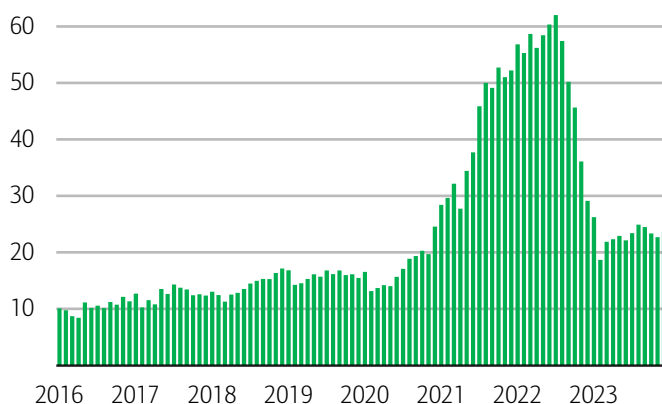
Source: Panama Canal Authority

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Container liner monthly revenue

Exhibit 48: Evergreen – monthly revenue, 2016-23 (NT\$ bn)

Evergreen December monthly revenues: -19% YoY, +4% MoM

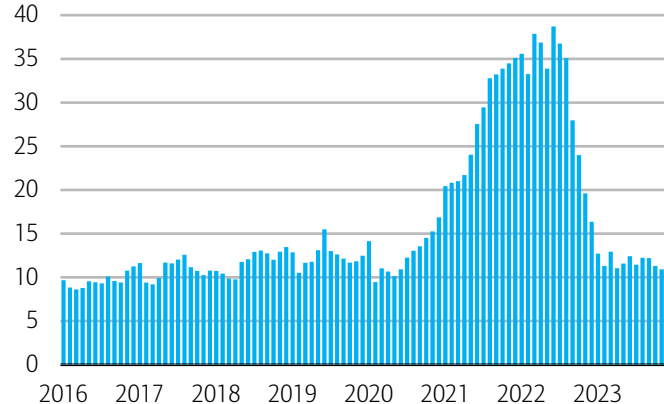


Source: Company reports

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Exhibit 49: Yang Ming – monthly revenue, 2016-23 (NT\$ bn)

Yang Ming December monthly revenues: -35% YoY, -2% MoM



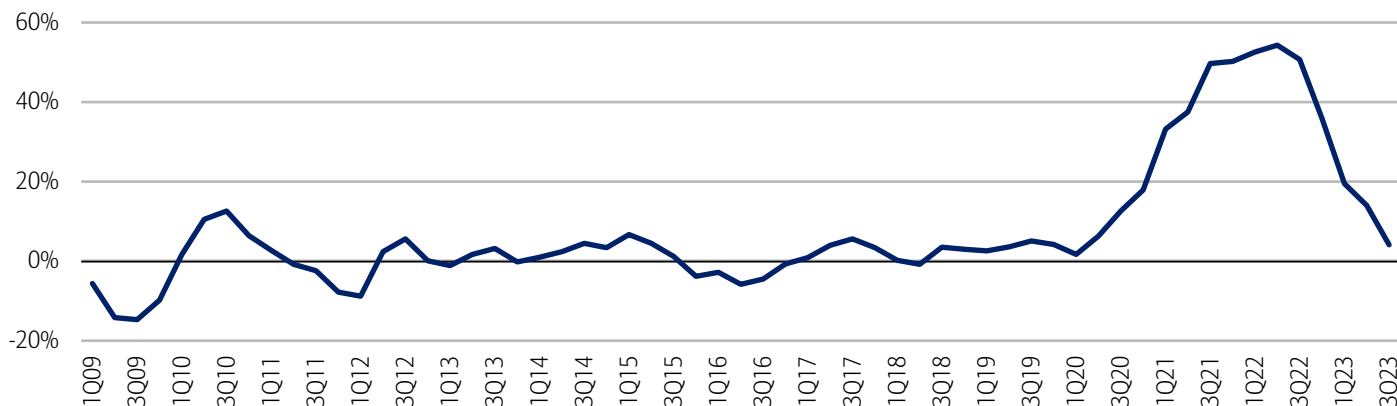
Source: Company reports

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Container liner average EBIT margins

Exhibit 50: Container liner average quarterly EBIT margin, 2009-23

3Q23 operating profit margin of 4%



Source: Linerlytica

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Vessel supply-side trends

Exhibit 51: Container shipping orderbook to fleet, 1996-24

Container shipping orderbook stands at around 25% of fleet

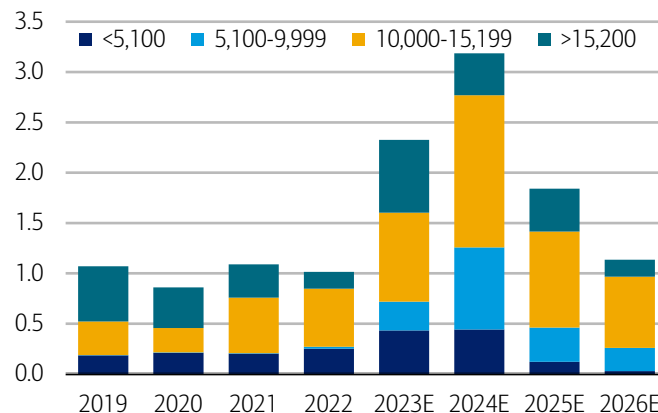


Source: Clarksons

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Exhibit 52: Delivery by vessel size (mn TEU), 2019-26E

Deliveries ramping into 2024 with ~3.2mn TEU for delivery

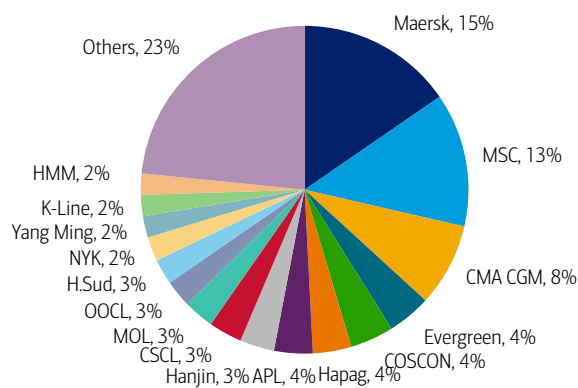


Source: Linerlytica

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Exhibit 53: Container liner capacity share in 2013

Top 10 carriers in 2013 = ~60% market share

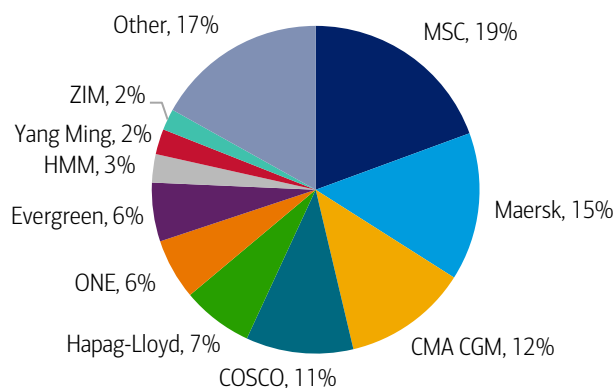


Source: Alphaliner

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Exhibit 54: Container liner capacity share in 2023

Top 10 carrier in 2023 = ~83% market share

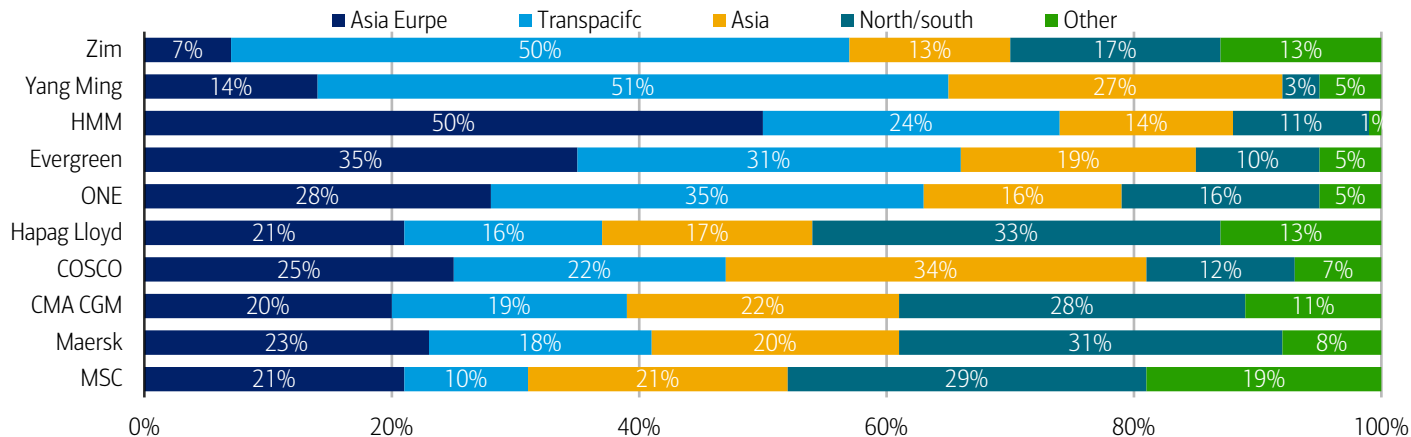


Source: Linerlytica

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Exhibit 55: Container liner capacity by route

Container liner capacity deployment by route

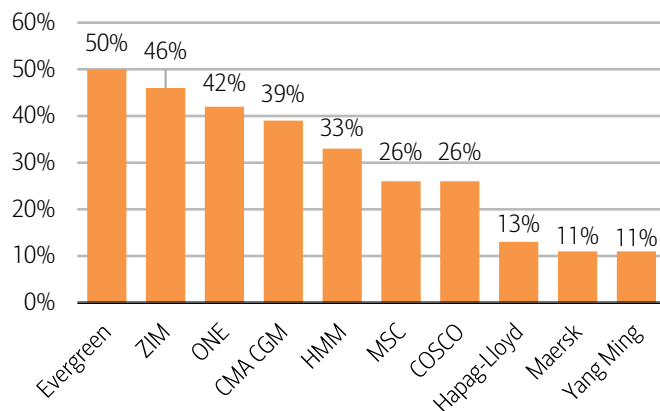


Source: Alphaliner. *Asia includes Middle East, India

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Exhibit 56: Container liners – orderbook to fleet

Larger orderbooks for Evergreen, ZIM, and ONE

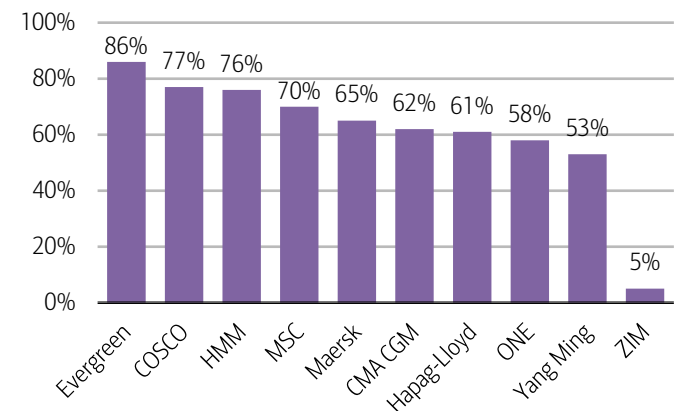


Source: Linerlytica

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Exhibit 57: Container liners - % of fleet which is owned/finance lease

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

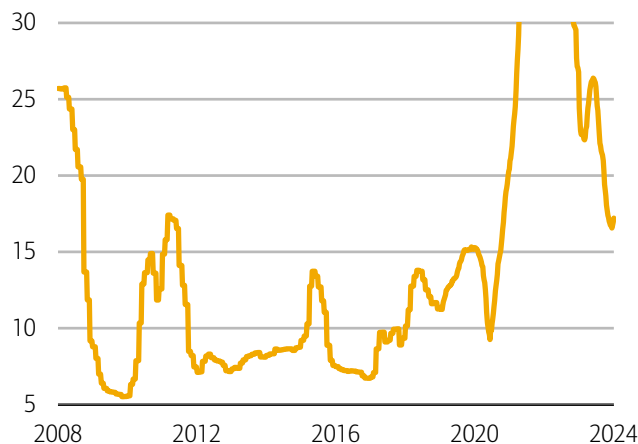


Source: Linerlytica

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Container shipping costs**Exhibit 58: Average containership charter rate (US\$ k/day), 2008-24**

Average charter rates now around US\$17K/day

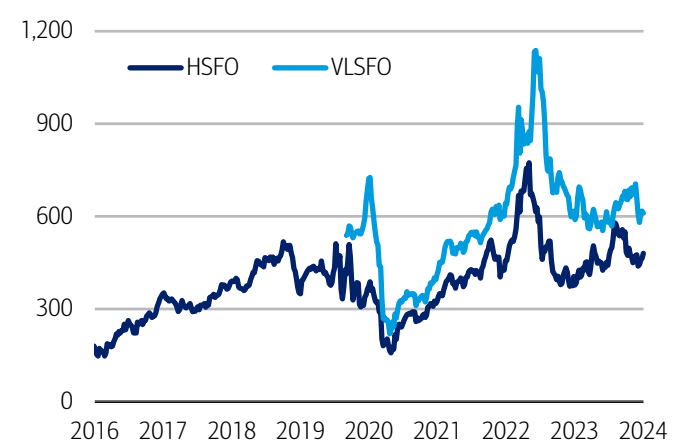


Source: Clarksons

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Exhibit 59: Singapore bunker price (US\$/ton), 2016-24

VLSFO ~US\$610/ton and HSFO ~US\$480/ton



Source: Clarksons

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Container vessel speeds & scrapping

Exhibit 60: Container vessel average sailing speed (knots), 2013-23

Container vessels sailing speed below 14 knots

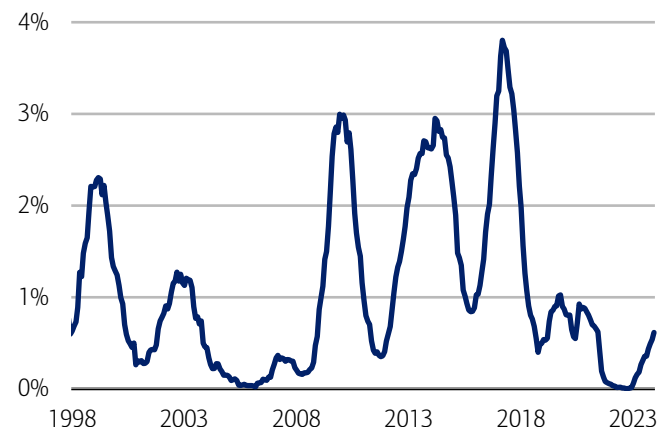


Source: Clarksons

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Exhibit 61: Container scrap rate (% of fleet), 1998-2023

Scrapping rate around 0.6% of fleet



Source: Clarksons

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Container shipping - demand & supply outlook

Exhibit 62: 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%	0.3%	3.4%	3.5%
New vessel deliveries	8.6%	9.4%	4.7%	5.9%	6.1%	4.7%	3.7%	4.5%	4.4%	8.7%	10.2%	5.9%
Demolition	-2.1%	-0.1%	-2.9%	-2.0%	-0.2%	-0.9%	-0.7%	-0.1%	-0.1%	-0.7%	-2.5%	-2.0%
Net Slot Capacity Growth	6.5%	9.4%	1.7%	3.9%	5.9%	3.9%	3.0%	4.4%	4.3%	8.0%	7.7%	3.9%
Impact of change in idle rate	1.4%	-0.7%	-3.5%	2.9%	1.6%	-1.3%	-2.9%	5.2%	0.0%	-0.4%	0.0%	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%	5.8%	0.9%	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%	13.4%	8.6%	3.9%
Effective Demand / Supply balance	-2.6%	-7.4%	+4.7%	-0.1%	-2.3%	-0.1%	+1.1%	+2.3%	+1.3%	-13.1%	-5.2%	-0.4%

Source: BofA Global Research estimates, Linerlytica

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Tanker shipping

Freight rates

Exhibit 63: Average quarterly tanker rates (US\$/day), 2023-24

Average quarterly tanker rates up QoQ but down YoY

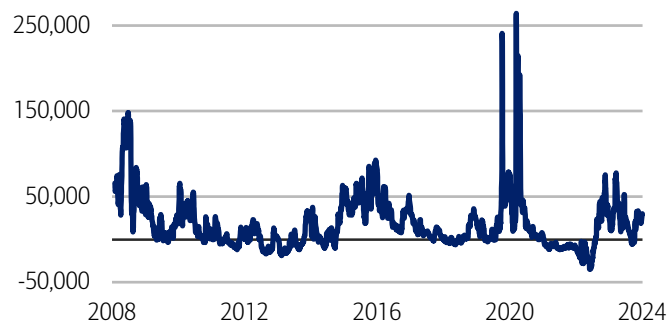
Date	1Q23	2Q23	3Q23	4Q23	1Q24
VLCC	34,498	25,984	8,747	20,792	29,757
Suezmax	74,764	49,350	17,655	49,911	53,010
Aframax	64,833	45,616	18,800	45,969	52,012
MR	29,143	25,574	24,610	28,467	20,704
LR2	50,462	48,135	33,058	39,923	44,000
% YoY					
VLCC	-295%	-220%	-10%	-51%	-14%
Suezmax	244%	38%	-65%	-44%	-29%
Aframax	197%	28%	-60%	-42%	-20%
MR	199%	-24%	-38%	-31%	-29%
LR2	149%	78%	-2%	-14%	-13%
% QoQ					
VLCC	-19%	-25%	-66%	138%	43%
Suezmax	-16%	-34%	-64%	183%	6%
Aframax	-18%	-30%	-59%	145%	13%
MR	-30%	-12%	-4%	16%	-27%
LR2	9%	-5%	-31%	21%	10%

Source: Clarksons, Note: 1Q24 numbers are average of January data

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Exhibit 65: VLCC freight rates (US\$/day), 2008-24

Baltic VLCC rates making recovery in November/December

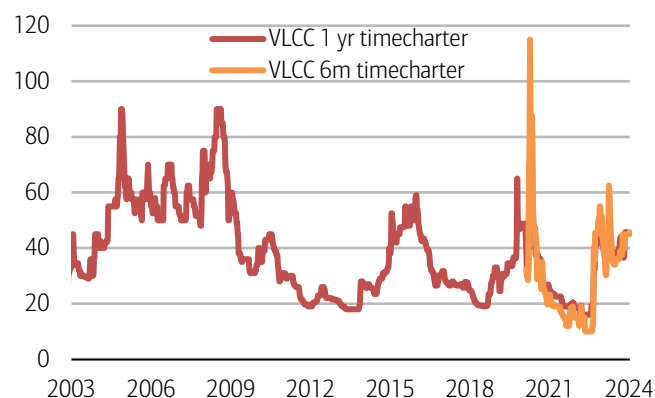


Source: Clarksons

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Exhibit 67: VLCC time charter rates (US\$ k/day), 2003-24

One year VLCC time charter rates around US\$45k per day

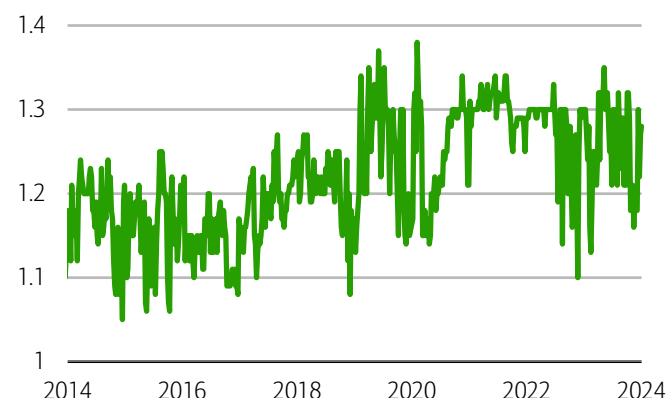


Source: Clarksons

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Exhibit 64: VLCC supply vs demand in Middle East #, 2014-24

VLCC supply vs demand in Middle East #

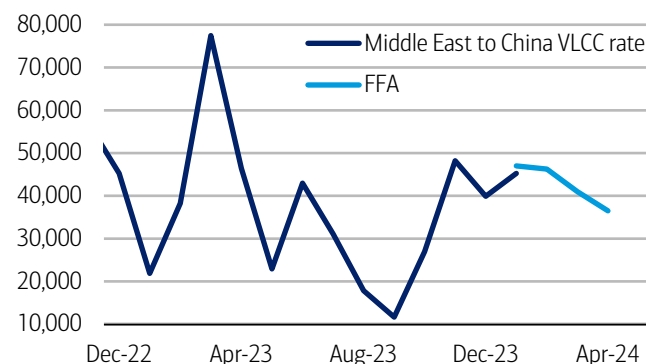


Source: Bloomberg. # 1 indicates equal number of VLCC supply vs demand for next 30 days, 1.1 indicates 10% surplus of VLCC relative to demand in coming 30 days.

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Exhibit 66: VLCC freight forward agreement rates (US\$/day)

Forward curve at ~US\$40k/day in 1Q24

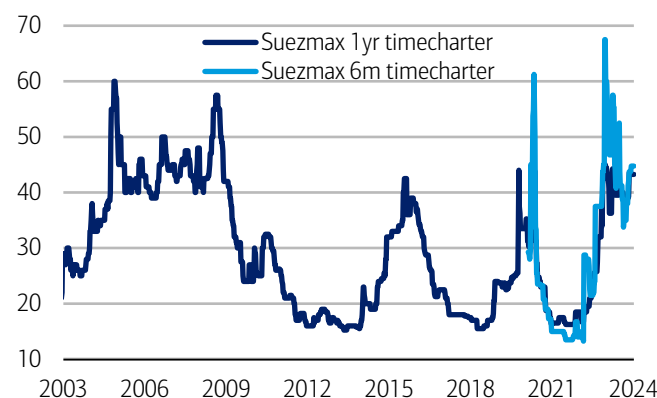


Source: Clarksons, Baltic Exchange

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Exhibit 68: Suezmax time charter rates (US\$ k/day), 2003-24

One year Suezmax time charter rates around US\$43k per day



Source: Clarksons

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Crude oil demand

Exhibit 69: Seaborne crude oil volumes (% YoY), 2015-23

Seaborne crude tanker volume YoY growth slowing on OPEC cuts

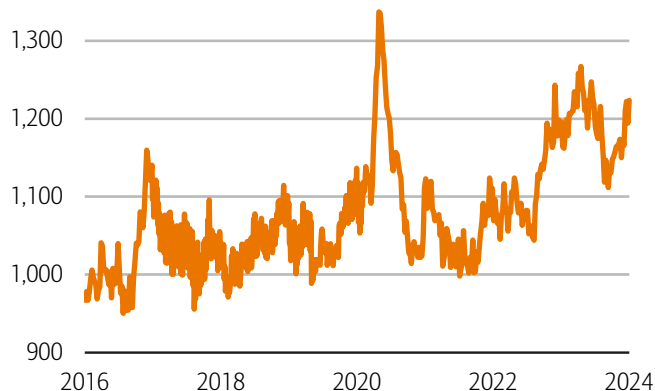


Source: Clarksons

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Exhibit 70: Crude tanker barrels on the water (mn bbl), 2016-24

Crude tanker demand has sequentially improved



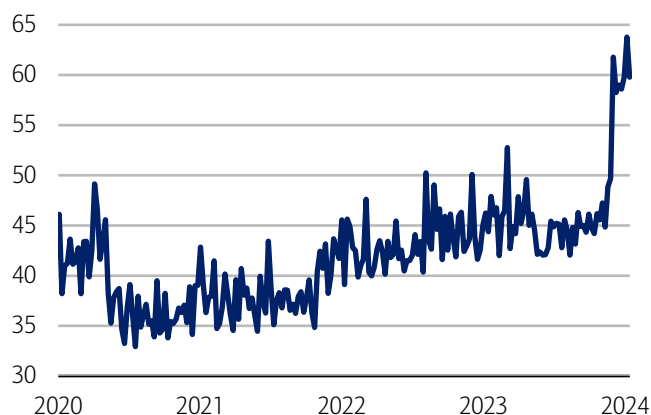
Source: Clarksons

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Crude oil exports

Exhibit 71: Global weekly crude oil exports (mn b/d), 2020-24

Global crude oil exports above 60mn b/d

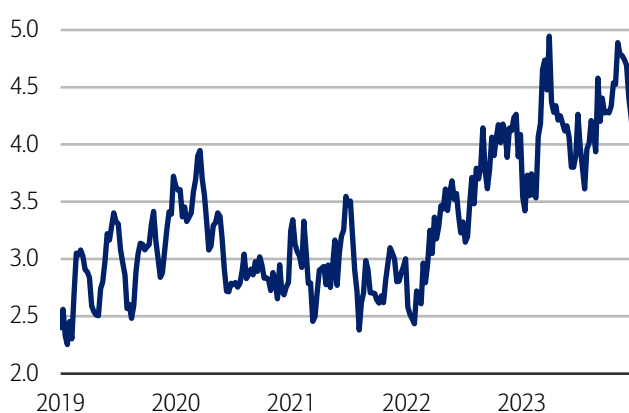


Source: Bloomberg

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Exhibit 72: US crude exports (mn b/d) – 4w MA, 2019-23

US crude oil exports slightly bounced back

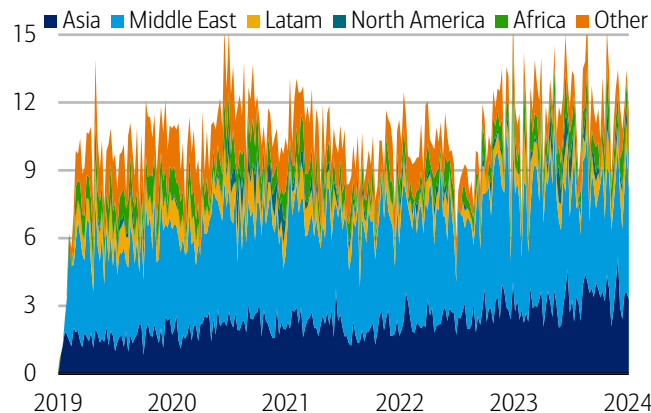


Source: Bloomberg

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Exhibit 73: Chinese weekly crude imports (mn b/d), 2019-24

Chinese imports strengthened in recent weeks

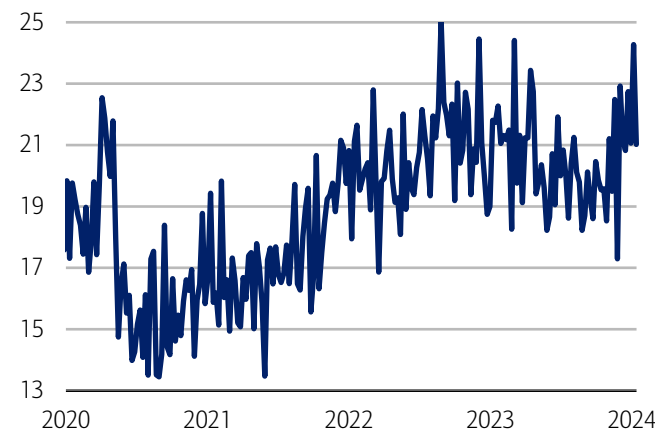


Source: Bloomberg

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Exhibit 74: Middle east crude exports (mn bbl / week), 2020-24

Middle East exports came down but still remain relatively high

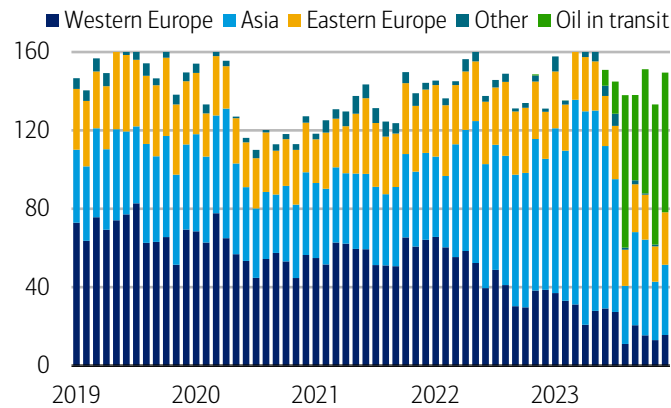


Source: Bloomberg

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Exhibit 75: Russian seaborne crude exports (mn bbl / month), 2019-23

Total Russian crude exports still robust

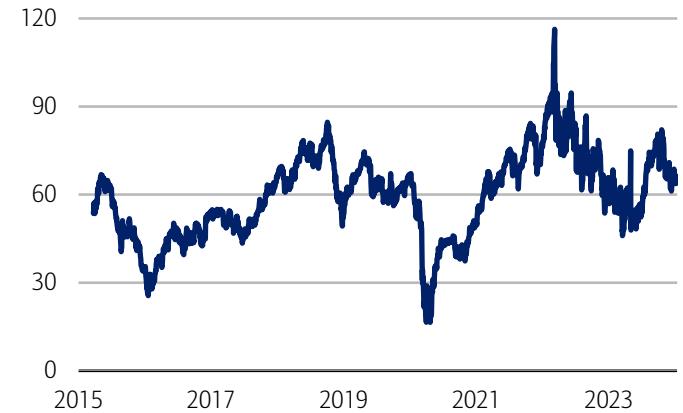


Source: Bloomberg

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Exhibit 76: Med Urals crude oil price (US\$/bbl), 2015-24

Urals crude oil price ~US\$65/bbl

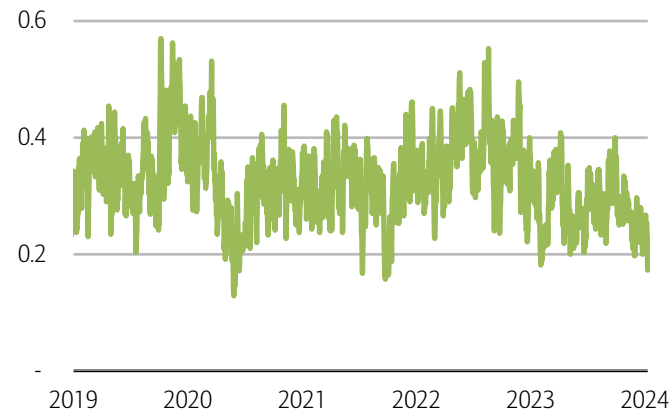


Source: Bloomberg

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Panama Canal transit volume and congestion**Exhibit 77: Panama Canal oil tanker transit 7day MA (mn DWT/day)**

Some recovery in early December but still lower end of historical range

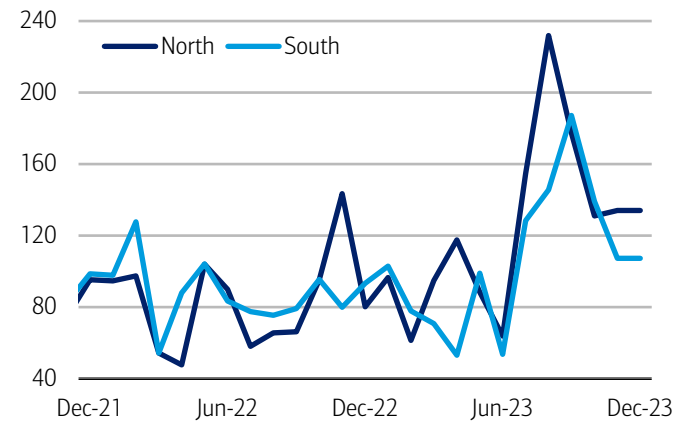


Source: Clarksons

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Exhibit 78: Panama Canal tanker waiting time (hours), 2021-23

4-6 day waiting time for both north and south bound for tanker

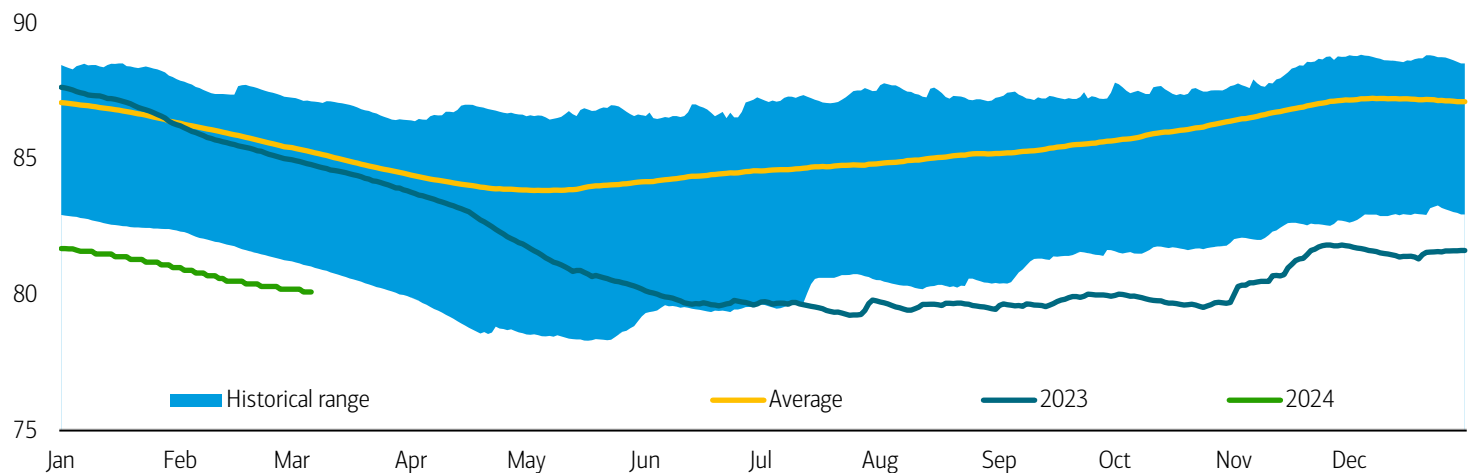


Source: Panama Canal Authority

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Exhibit 79: Panama Gatun lake water level (ft)

Current water level remains well below historical water level



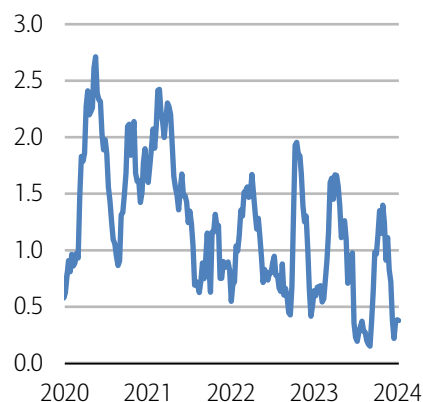
Source: Panama Canal Authority. Note: 2024 data is Panama Canal Authority's estimates

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Oil refinery outage

Exhibit 80: Europe (k bbl/ day)

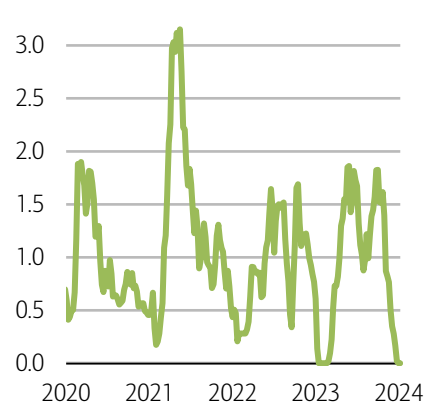
Outage around 0.4k bbl/day at early January



Source: Bloomberg. Note: Europe include Mediterranean
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Exhibit 81: Asia Pacific (k bbl/ day)

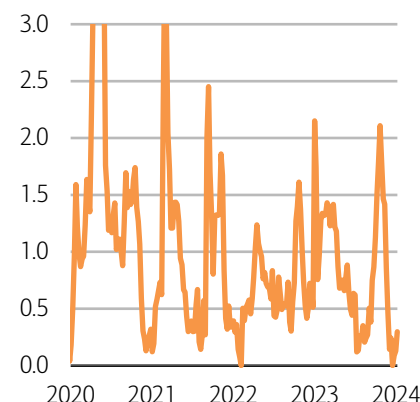
No outage in January 2024



Source: Bloomberg. Note: Asia Pacific includes Japan & China
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Exhibit 82: North America (k bbl/ day)

Reduction in North American outages



Source: Bloomberg
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Tanker supply

Exhibit 83: Crude tanker orderbook as % of fleet, 1996-24

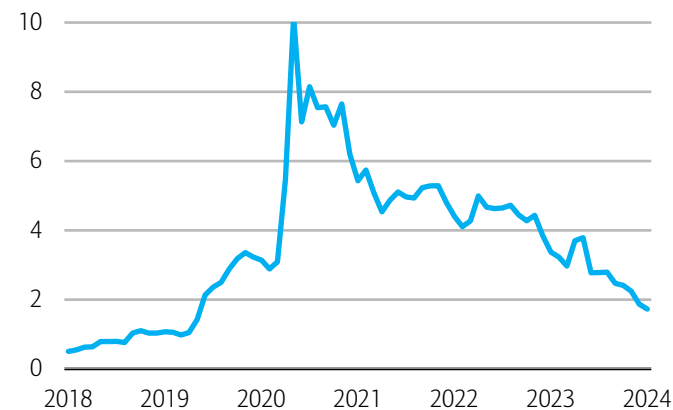
Crude tanker orderbook to fleet ~4.5%



Source: Clarksons
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Exhibit 84: Crude tanker storage as % of fleet, 2018-24

Tanker storage now around 1.7% of fleet

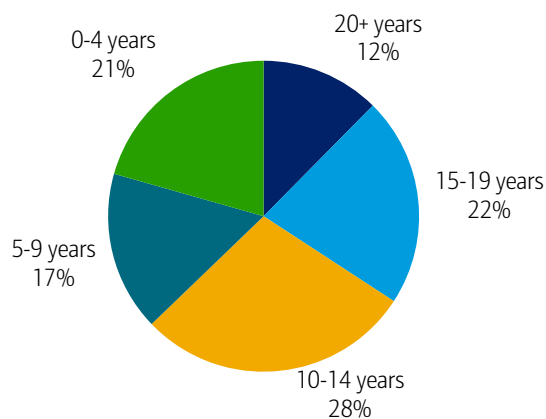


Source: Clarksons
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Tanker age and scrap rate

Exhibit 85: Crude tanker – age distribution, 2023

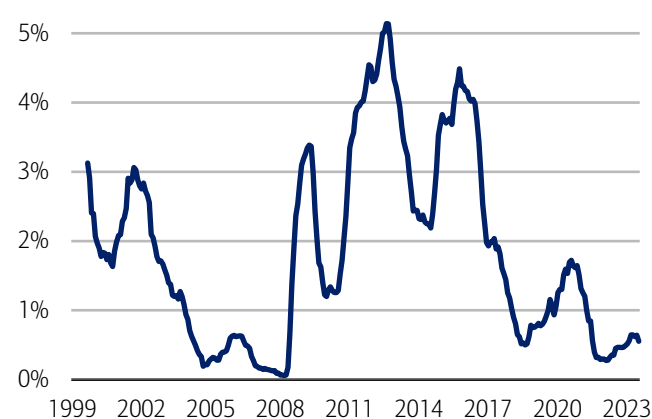
34% of fleet is older than 15 years



Source: Clarksons
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Exhibit 86: Tanker scrap rate (%) – 1999-2023

Scraping rate down to still around 0.65% of fleet



Source: Clarksons
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Crude tanker demand & supply

Exhibit 87: 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%	6.8%	5.0%	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%	0.4%	0.8%
Demand / supply balance	-0.6%	+1.9%	-1.9%	-0.9%	+2.3%	-4.8%	-7.6%	-3.6%	+3.8%	+4.2%	+4.6%	+0.7%
Crude tanker fleet (mn dwt)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Fleet, beginning	339.5	340.8	347.5	367.6	386.3	388.5	417.0	430.7	442.4	446.4	452.6	454.2
New delivery	9.3	8.4	20.8	27.8	20.9	28.2	17.1	16.6	9.3	10.7	3.2	5.0
Scrapping rate	(6.0)	(1.3)	(1.4)	(9.0)	(17.1)	(2.6)	(3.4)	(9.0)	(5.3)	(4.5)	(1.6)	(1.6)
Others	(2.1)	(0.4)	0.7	(0.2)	(1.7)	3.0	0.0	4.0	0.0	0.0	0.0	0.0
Fleet, Ending, Dwt mn **	341	347	368	386	388	417	431	442	446	453	454	458
Growth	0.4%	2.0%	5.8%	5.1%	0.6%	7.4%	3.3%	2.7%	0.9%	1.4%	0.4%	0.8%
Floating storage adjustment	0.0%	-1.0%	0.1%	0.8%	0.6%	-1.4%	-2.4%	-2.8%	2.3%	1.2%	0.0%	0.0%
Effective supply growth	0.4%	1.0%	5.9%	5.9%	1.1%	6.0%	0.9%	-0.1%	3.2%	2.6%	0.4%	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%	0.4%	0.4%
Gross delivery rate	2.7%	2.5%	6.0%	7.6%	5.4%	7.2%	4.1%	3.9%	2.1%	2.4%	0.7%	1.1%

Source: Clarksons, BofA Global Research estimates

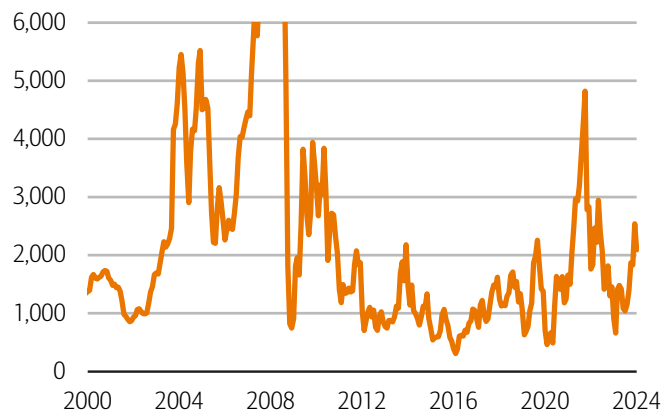
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Dry bulk shipping

Freight rates

Exhibit 88: Baltic Dry Index, 2000-24

BDI just above 2,000



Source: Clarksons

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Exhibit 89: Baltic average rates (US\$/day), 2023-24

Dry bulk quarterly rates up both QoQ and YoY

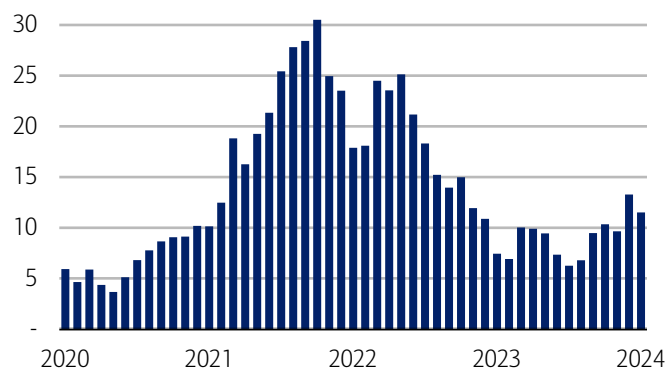
Date	1Q23	2Q23	3Q23	4Q23	1Q24
BDI	1,011	1,313	1,194	2,033	2,090
Capesize	9,144	15,561	13,407	28,128	29,592
Panamax 82	11,326	12,248	11,890	16,117	16,222
Supramax 58	10,171	10,763	10,028	14,148	13,990
Handysize 38	9,702	10,414	8,863	12,851	13,612
% YoY					
BDI	-49%	-48%	-36%	33%	107%
Capesize	-38%	-28%	-21%	89%	224%
Panamax 82	-51%	-58%	-35%	0%	43%
Supramax 58	-60%	-61%	-53%	-5%	38%
Handysize 38	-60%	-61%	-59%	-14%	40%
% QoQ					
BDI	-34%	30%	-9%	70%	3%
Capesize	-39%	70%	-14%	110%	5%
Panamax 82	-29%	8%	-3%	36%	1%
Supramax 58	-31%	6%	-7%	41%	-1%
Handysize 38	-35%	7%	-15%	45%	6%

Source: Clarksons

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Exhibit 90: Handysize spot monthly average (US\$ k/day), 2020-24*

Spot handysize averaged ~US\$11.5k/day in January



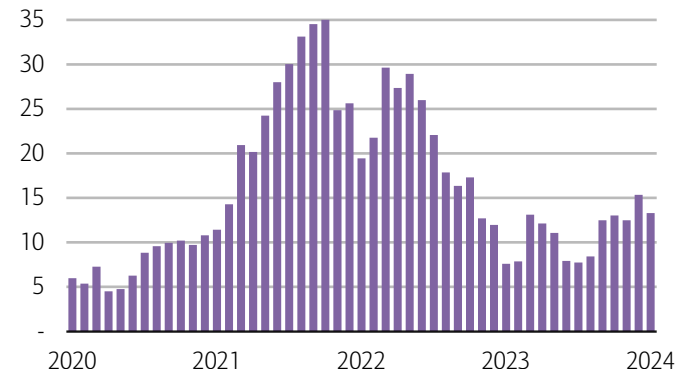
Source: Clarksons, BofA Global Research estimates

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

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Exhibit 91: Supramax spot monthly average (US\$ k/day), 2020-24*

Spot supramax averaged ~US\$13.3k/day in January



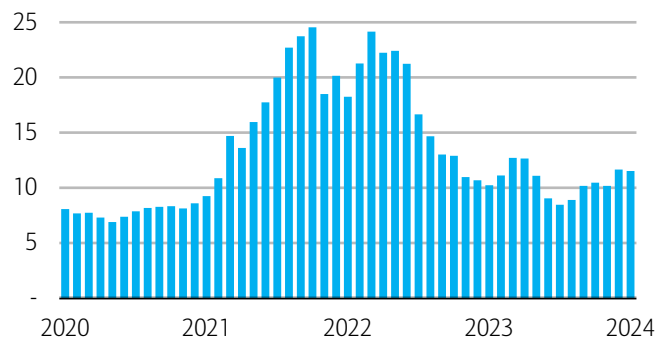
Source: Clarksons, BofA Global Research estimates

* Commission adjusted to be comparable to PacBasin achieved rates

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Exhibit 92: Handysize 1yr TC monthly average (US\$ k/day), 2020-24*

1yr time charter handysize averaging ~US\$11.5k/day in January



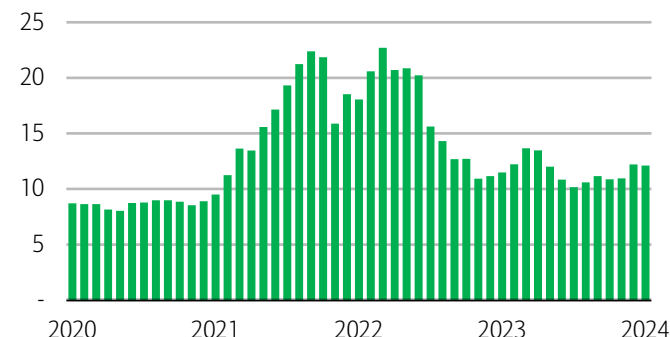
Source: Clarksons, BofA Global Research estimates

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

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Exhibit 93: Supramax 1yr TC monthly average (US\$ k/day), 2020-24*

1yr time charter supramax averaging ~US\$12.1k/day in January



Source: Clarksons, BofA Global Research estimates

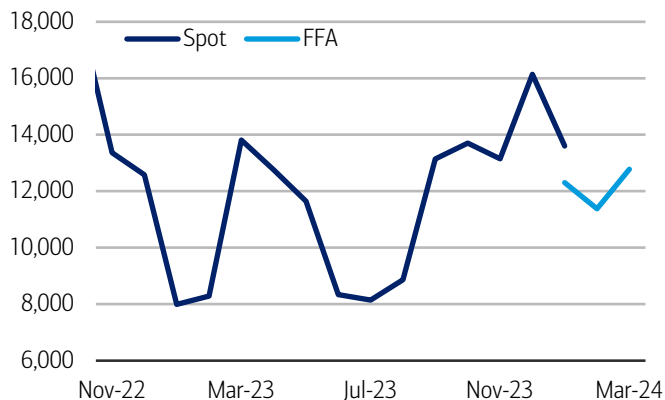
*Size and commission adjusted to be comparable to PacBasin average handy rates

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Handysize & Supramax FFA outlook

Exhibit 94: Supramax - Freight Forward Agreement, 2023-24

Supra forward curves pointing down from here

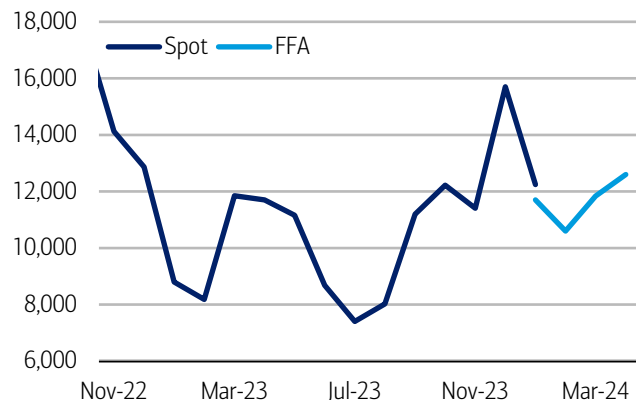


Source: Bloomberg, Braemar

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Exhibit 95: Handysize - Freight Forward Agreement, 2023-24

Handy forward curves point to down from here



Source: Bloomberg

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Dry bulk demand reads

Exhibit 96: Dry bulk demand growth (% YoY), 2015-23

Dry bulk demand improved in 2023

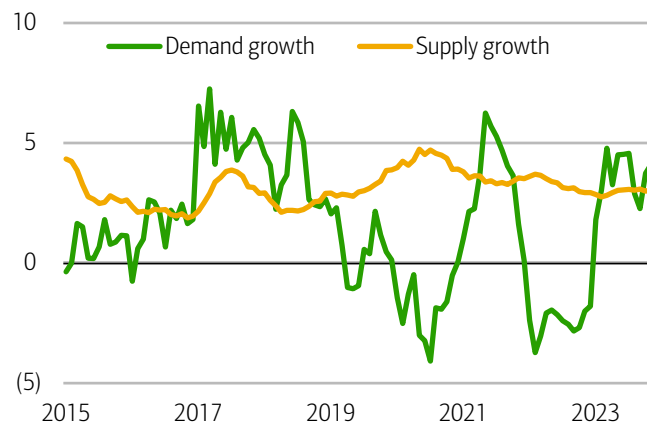


Source: Clarksons

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Exhibit 97: Bulk demand & supply growth (% YoY), 2015-23

Bulk demand growth above supply growth



Source: Clarksons

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

Iron ore demand growth remain around 5%

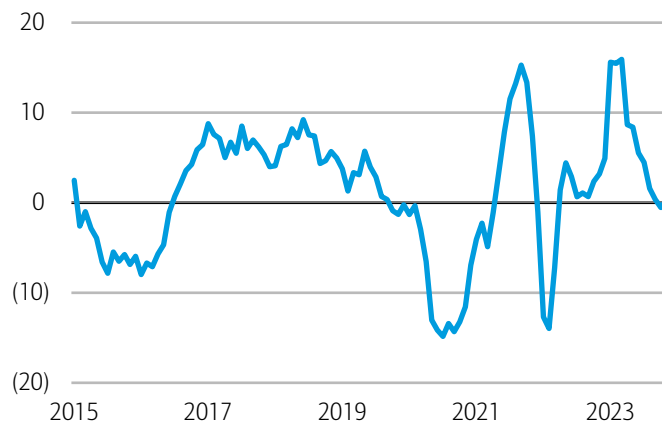


Source: Clarksons

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

Coal demand growth continue to decline



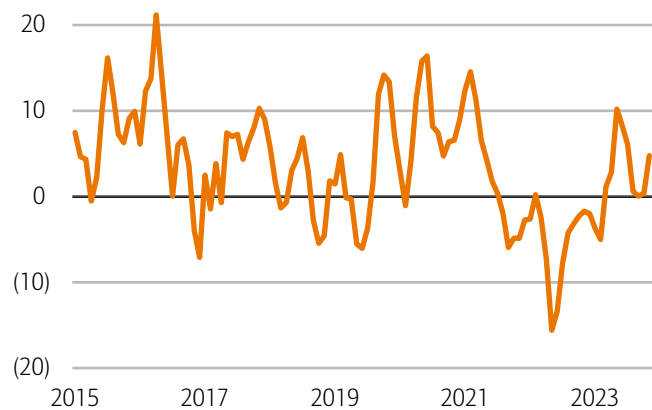
Source: Clarksons

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Exhibit 100: Grain demand growth (% YoY), 2015-23

Grain demand to show small sign of improvement

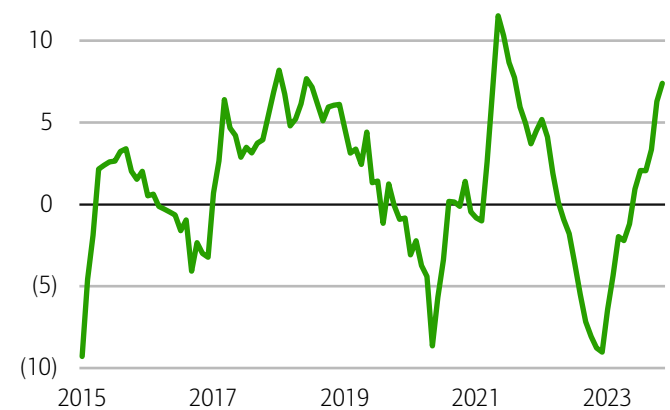


Source: Clarksons

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Exhibit 101: Minor bulk demand growth (% YoY), 2015-23

Minor bulk demand growth trending up

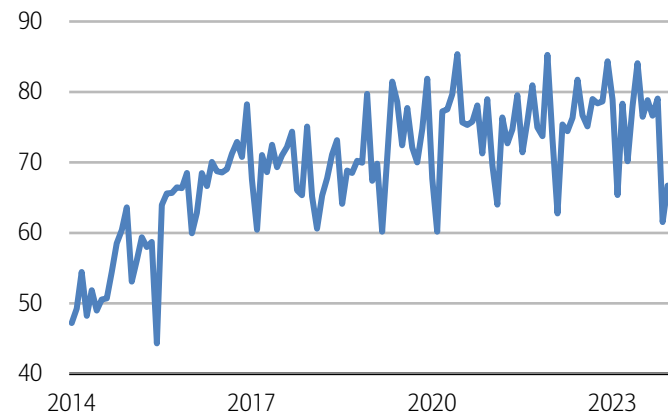


Source: Clarksons

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Iron ore monthly shipments**Exhibit 102: Australia iron ore monthly shipments (tn ton), 2014-23**

Australia iron ore exports recovering off cyclone disruptions

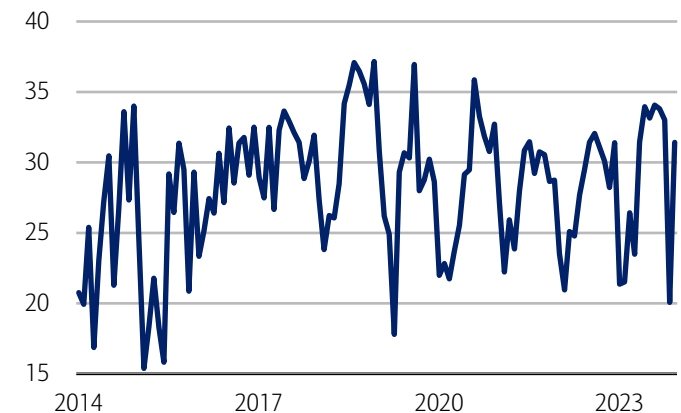


Source: Bloomberg

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Exhibit 103: Brazil iron ore monthly shipments (tn ton), 2014-23

Brazil iron ore exports relatively stable



Source: Bloomberg

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Vessel supply**Exhibit 104: Dry bulk orderbook to fleet (%), 1996-2024**

Orderbook to fleet down to around 8.0%

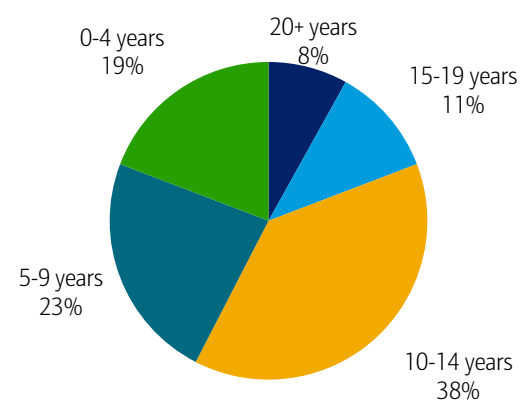


Source: Clarksons

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Exhibit 105: Dry bulk vessel age distribution, 2023

19% of fleet is older than 15 years

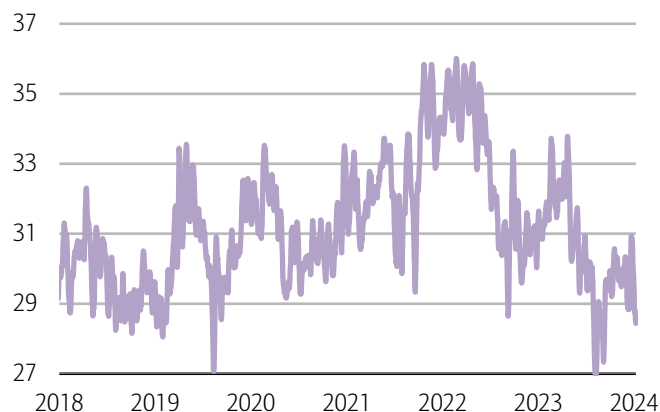


Source: Clarksons

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Port congestion

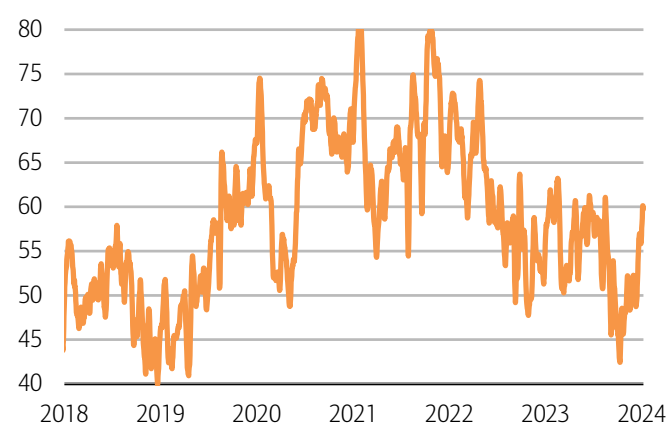
Exhibit 106: Daily dry bulk fleet at port (anchor or berth) (%), 2018-24
~30% of dry bulk fleet at port



Source: Clarksons

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Exhibit 107: Daily dry bulk fleet at Chinese ports (mn DWT 7D MA)
Rebounded in early January, now around 60 mn DWT

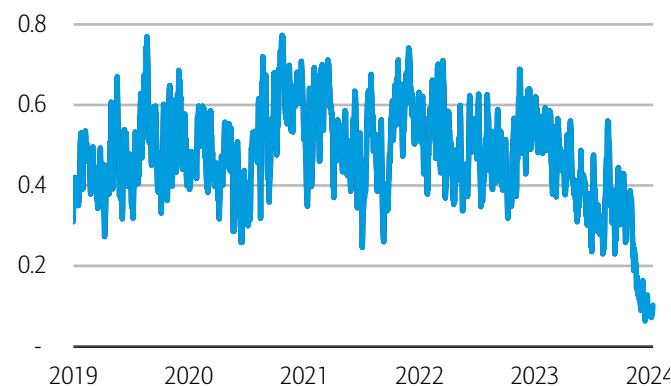


Source: Clarksons

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Panama Canal transit volume and waiting time

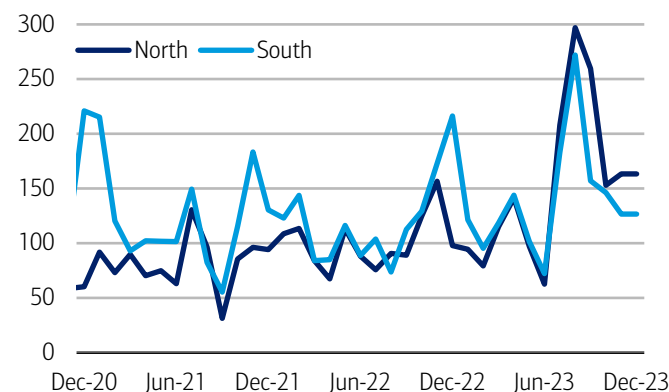
Exhibit 108: Panama Canal bulk carrier transit 7day MA (mn DWT/day)
Transit started to come down in early November and now below 0.1mn



Source: Clarksons

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Exhibit 109: Panama Canal bulker waiting time (hours), 2020-23
Bulk vessel congestion easing with average 5-7 day wait time



Source: Panama Canal Authority

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Bulk carrier price & scrap rate

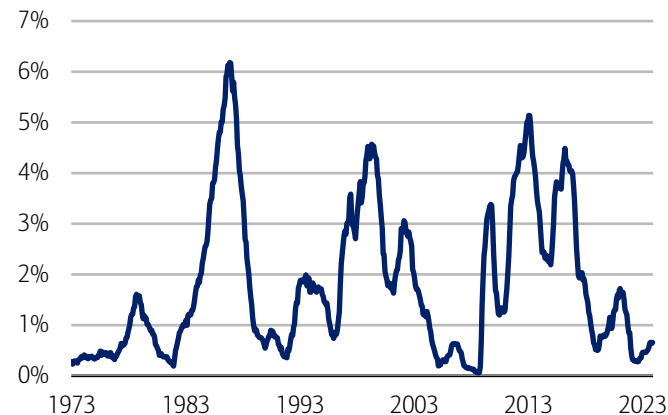
Exhibit 110: Bulk carrier secondhand vessel price index, 2011-23
Secondhand vessel prices started come down but still at higher end



Source: Clarksons

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Exhibit 111: Bulk carrier scrap rate (%) – 1973-2023
Scrapping rate down to around 0.65% of fleet



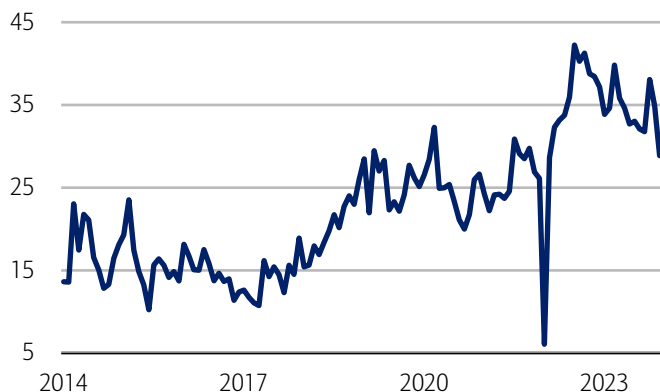
Source: Clarksons

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Coal monthly shipments

Exhibit 112: Indonesian coal monthly shipments (tn ton), 2014-23

Indonesian exports coming down

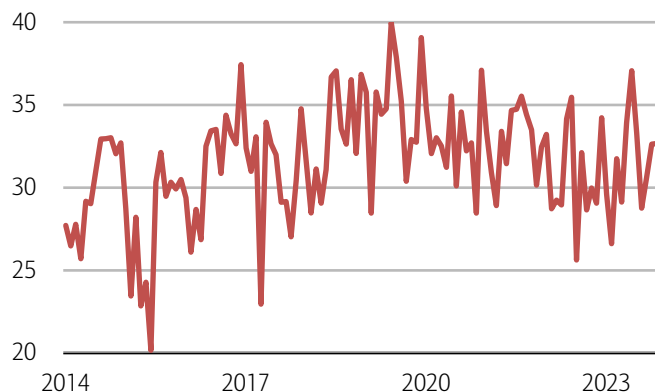


Source: Bloomberg

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Exhibit 113: Australian coal monthly shipments (tn ton), 2014-23

Aussie coal shipments came made a small recovery starting in September



Source: Bloomberg

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Dry bulk demand & supply

Exhibit 114: Dry bulk shipping demand & supply growth (% YoY), 2016-25E

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%	4.5%	1.9%	2.2%
Fleet Growth	2.3%	3.1%	2.7%	3.0%	4.1%	3.9%	2.9%	2.9%	2.0%	1.4%
Demand / Supply Balance	0.0%	0.8%	0.7%	-2.2%	-4.1%	-0.4%	-4.7%	1.6%	-0.1%	0.8%
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	1,005	1,024
New delivery	47	38	28	41	49	38	32	34	30	26
Demolition	(29)	(15)	(4)	(8)	(15)	(5)	(4)	(6)	(10)	(11)
Others	(0)	1	(1)	0	3	-	-	-	-	-
Fleet, Ending, Dwt mn	798	823	845	879	916	949	976	1,005	1,024	1,039
Growth	2.3%	3.1%	2.7%	4.0%	4.2%	3.6%	2.9%	2.9%	2.0%	1.4%
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%	2.9%	2.0%	1.4%
Gross delivery rate	6.1%	4.8%	3.4%	4.9%	5.6%	4.2%	3.3%	3.5%	3.0%	2.5%
Scrapping Rate	3.7%	1.8%	0.5%	0.9%	1.8%	0.6%	0.4%	0.6%	1.0%	1.1%

Source: BofA Global Research, Clarksons

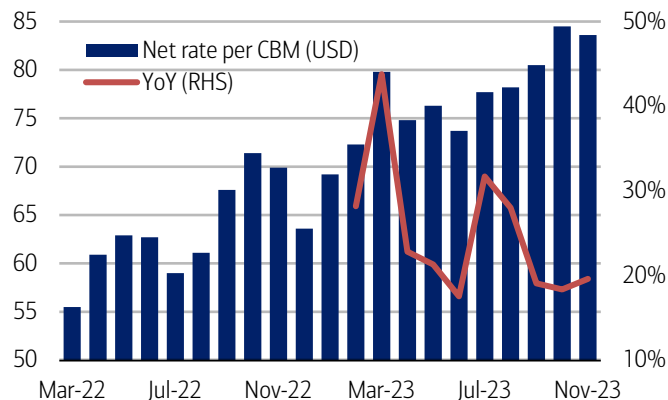
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Car carrier

Car carrier shipping freight rates

Exhibit 115: Hoegh Autoliners - net rate per cbm (US\$), 2022-23

Continue to stay high – above US\$80 per cbm



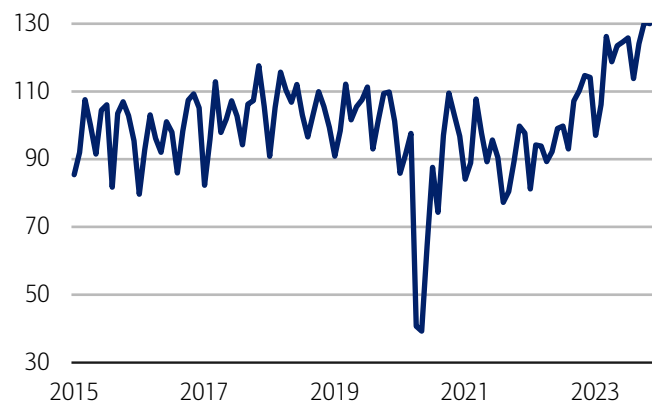
Source: hoeghautoliners

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Car carrier demand

Exhibit 117: Global seaborne car trade indicator, 2015-2023

Trending higher since September 2022



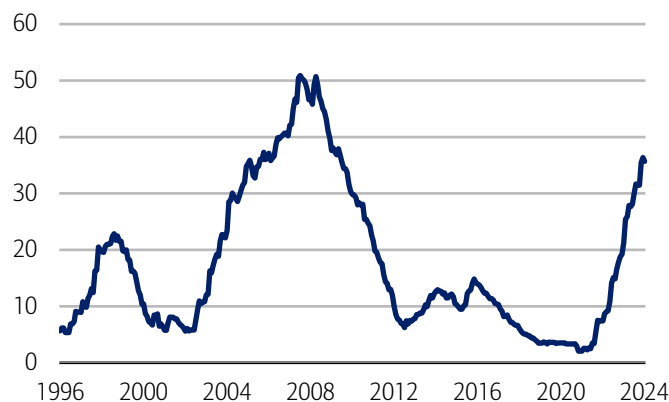
Source: Clarksons

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Car carrier supply & scrap

Exhibit 119: Pure car carrier orderbook % of fleet (%), 1996-2024

Orderbook now above 30% of fleet

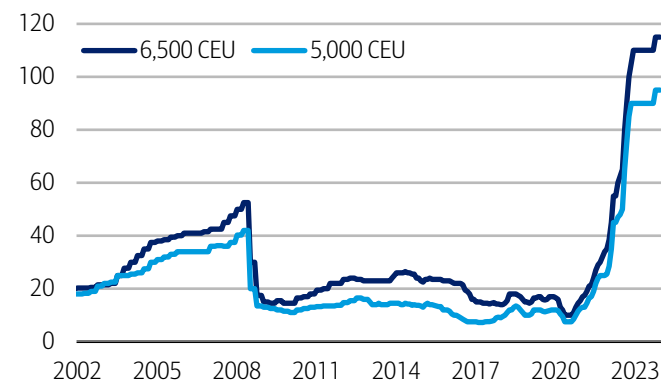


Source: Clarksons

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Exhibit 116: Car carrier 1 year time charter rate (US\$ k/day), 2002-23

Rates rapidly increased starting in spring, 2021

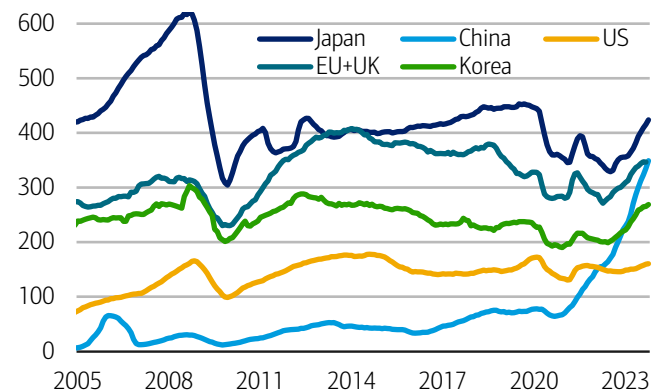


Source: Clarksons

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Exhibit 118: Global seaborne car exports TTM ('000's), 2005-23

Chinese car export have drastically increased post-COVID

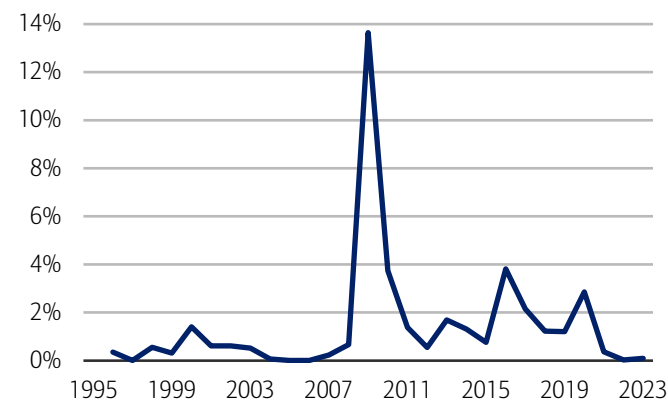


Source: Clarksons

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Exhibit 120: Car carrier scrap rate (%), 1995-2023

Scrap rate has been close to zero for the past couple of years



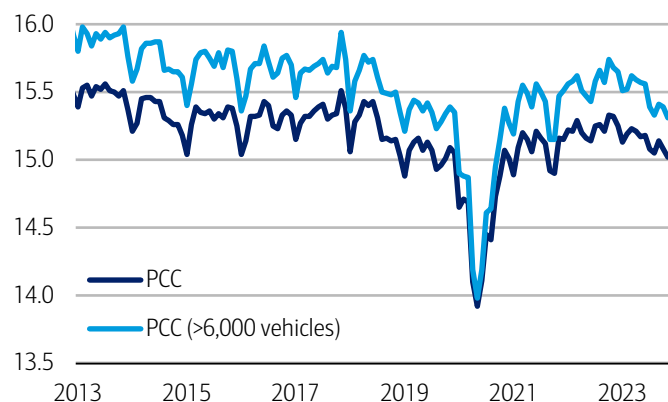
Source: Clarksons

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Red Sea disruption & Car carrier secondhand price

Exhibit 121: Pure car carrier average speed (knots), 2013-23

Average speed has been gradually declining

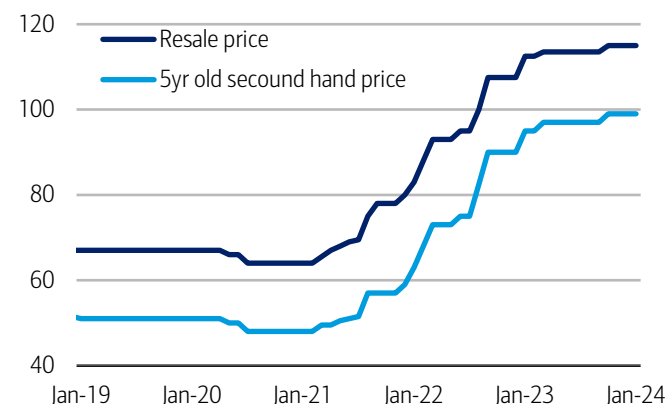


Source: Clarksons

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Exhibit 122: Pure car and truck carrier prices (US\$ mn), 2019-24

Both resale price and secondhand prices have increased since spring, 2021



Source: Clarksons. Note: Pure car and truck carrier size = 6,500 CEU

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Car carrier shipping - demand & supply outlook

Exhibit 123: Car carrier demand & supply outlook

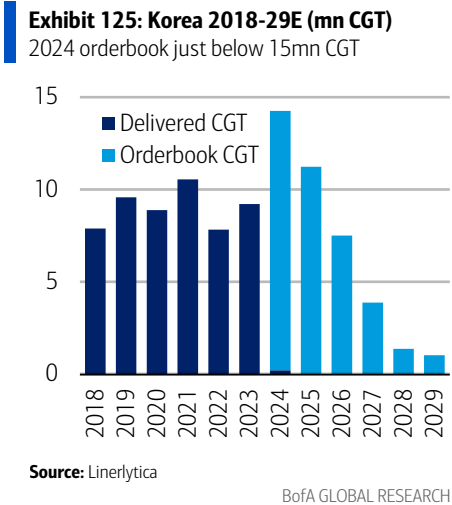
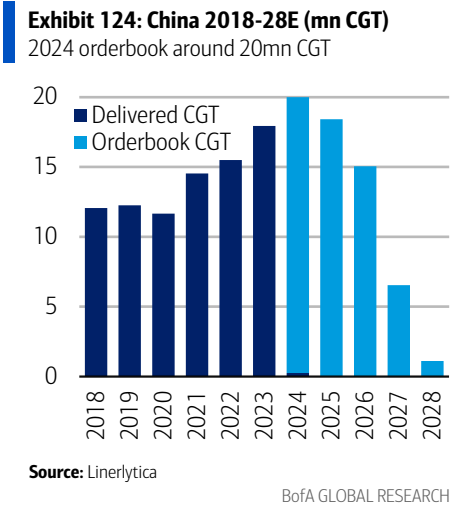
Car carrier tightness set to unwind from 2024-25E as new deliveries arrive

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024 E	2025 E	2026 E	2027 E
Demand growth (% p.a.)	2.0%	-0.5%	0.8%	-0.3%	6.5%	2.5%	0.1%	-20.1%	7.1%	7.0%	14.3%	4.1%	3.7%	3.1%	3.2%
Net supply growth (% p.a.)	5.0%	1.6%	2.6%	3.1%	-0.3%	2.0%	1.2%	-0.6%	-1.6%	1.2%	0.4%	8.1%	10.0%	6.2%	0.7%
Demand/(supply) imbalance	-3.0%	-2.1%	-1.8%	-3.4%	6.8%	0.5%	-1.1%	-19.5%	8.7%	5.9%	14.0%	-4.0%	-6.3%	-3.2%	2.5%
Gross deliveries (% p.a.)	3.5%	4.0%	4.0%	3.6%	4.1%	2.4%	0.8%	1.4%	1.5%	0.5%	1.9%	8.6%	10.5%	6.7%	1.2%
Scrapping (% p.a.)	1.8%	1.3%	0.8%	3.9%	2.1%	1.2%	1.2%	2.8%	0.4%	0.0%	0.1%	0.5%	0.5%	0.5%	0.5%

Source: Clarksons, BofA Global Research estimates

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Shipyard vessel delivery schedule



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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 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.

Additional information about the methodology used to aggregate the data is available upon request.

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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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