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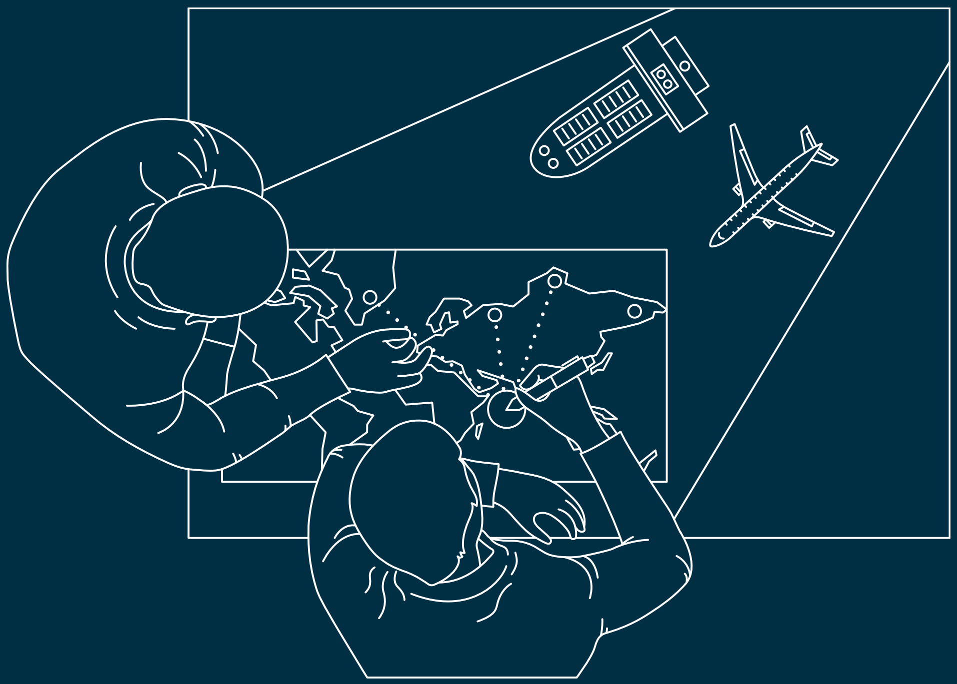

Shipping Lines: ’23 Recap and ’24 Outlook

Intermodal Africa Conference

Namibia

28th February 2024

Services

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Technical Advisory

Our technical advisory services underpin all the work that we do. Our advisors are with you every step of the way, from the stage of evaluating investment opportunities and risks, to value creation and divestment.

Strategic & Commercial Advisory

Infrata brings a track record of developing bespoke solutions to meet the specific needs of its individual clients, from O&M Advisory Support role at bid stage to Asset Management services post-transaction. This creative approach is essential to our success, and that of our clients.

Demand & Traffic Advisory

We believe that accurate traffic forecast analysis is crucial to making a shrewd investment in infrastructure. Market analysis and sector insight help us evaluate revenue potential with our clients.

Environmental, Social & Governance Advisory

The infrastructure landscape is changing. Increasingly, Environmental, Social, and Governance (ESG) are playing a key role in investment decisions. We are able to support you in this key transition.

Container Shipping Trends – Vessel Size Increases

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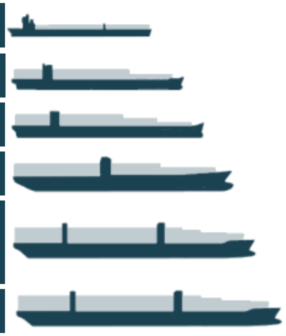
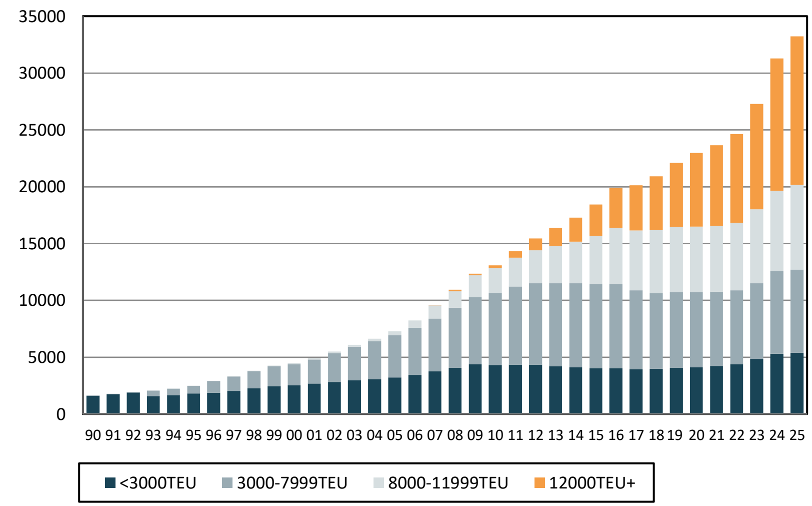
Trend for larger ships is well-established – all major lines committed to Ultra Large Container Vessels (ULCVs)

Container Ship Sizes

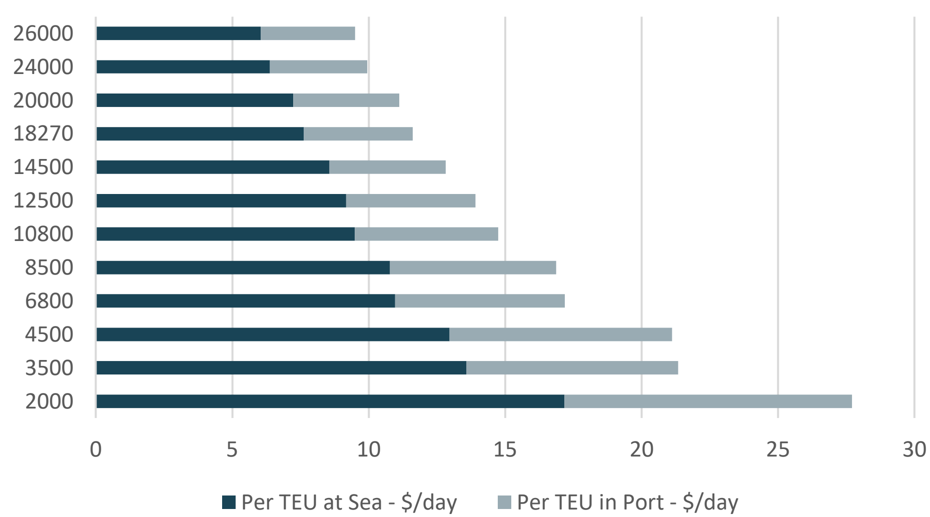
Panamax (1980) 3k-4k TEU	LOA (m) : 250 Beam (m): 32 Draft (m)*: 12.5
Post Panamax (1988) 4k-5k TEU	LOA (m) : 285 Beam (m): 40 Draft (m)*: 13
Post Panamax Plus (2000) 6k-8k TEU	LOA (m) : 300 Beam (m): 43 Draft (m)*: 14.5
New Panamax (2014) 12.5 TEU	LOA (m) : 366 Beam (m): 49 Draft (m)*: 15.2
Post New Panamax (2006) 15k TEU & **Triple E (2013)** 18k TEU	LOA (m) : 400 Beam (m): 59 Draft (m)*: 15.5
New Generation 23k TEU	LOA (m) : 430 Beam (m): 59 Draft (m)*: 15.5



* Fully laden draft. Vessels require 10-15% under keel clearance at the berth.



Diminishing Returns of Investment - Economies of Scale



Key Conclusions:

- As vessels increase in size , so number of ports (and Canals) that can handle them has declined
- The continued introduction of ever-larger ships means that the cascading process will continue
- Desire for shipping lines to continue to seek economies of scale will also continue, but only up to a point because of diminishing returns on investment beyond 24,000TEU
- Additional "spare" capacity will become available in the short-term and can be used to provide additional calls in regions such as The Mediterranean, Baltics, ME/ISC
- Lines will also "use" additional tonnage in an attempt to save fuel, by increasing the number of vessels deployed and reducing vessel speed

Market Share and Capacity Growth

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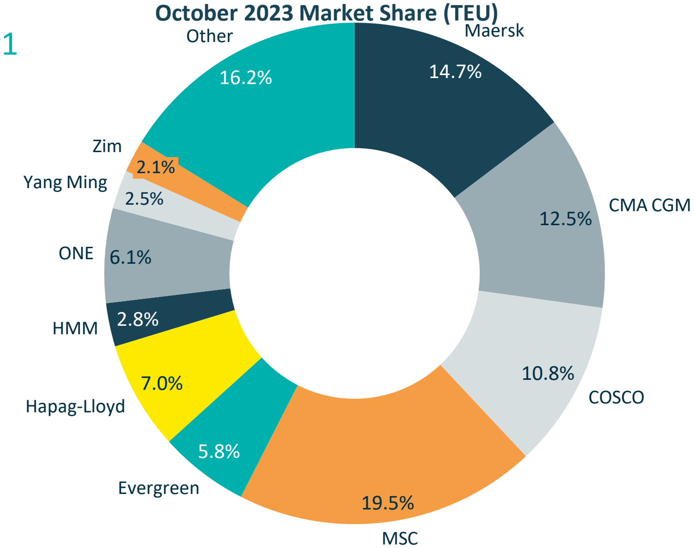
The top ten shipping lines hold 84% of the total market share, with MSC at #1 after overtaking Maersk as the largest container line in 2022

- Frequent consolidations and M&As have resulted in the top ten shipping lines dominating the container shipping market.
- Larger operators are more insulated from changing market conditions, as they can easily change the networks they offer and move vessels within much wider global schedule networks..
- MSC is now the leading shipping line in terms of tonnage deployed following a 20% increase in capacity. With continued strong ordering, it is likely that CMA CGM could also overtake Maersk Line in the near future.
- Other major vessel investments by Zim (9%), Hapag-Lloyd (10%), CMA (5%) and ONE (13%) to keep up with competition and alliance partners.



Rank	Line	Capacity 1/12/2023	Capacity 1/12/2022	Gain/Loss	% Change	2022 Rank
1	MSC	5,506,913	4,572,036	934,877	20%	1
2	Maersk Line	4,152,375	4,225,710	-73,335	-2%	2
3	CMA CGM	3,542,748	3,384,601	158,973	5%	3
4	COSCO	3,051,113	2,867,140	183,973	6%	4
5	Hapag-Lloyd	1,968,136	1,786,730	181,406	10%	5
6	ONE	1,731,270	1,527,159	204,111	13%	7
7	Evergreen	1,642,979	1,636,837	6,142	0.4%	6
8	HMM	783,732	818,063	-34,331	-4%	8
9	Yang Ming	707,423	707,354	69	0%	9
10	ZIM Line	585,010	537,522	47,488	9%	10

Source: Alphaliner

Recent Financial Results of Major Shipping Lines

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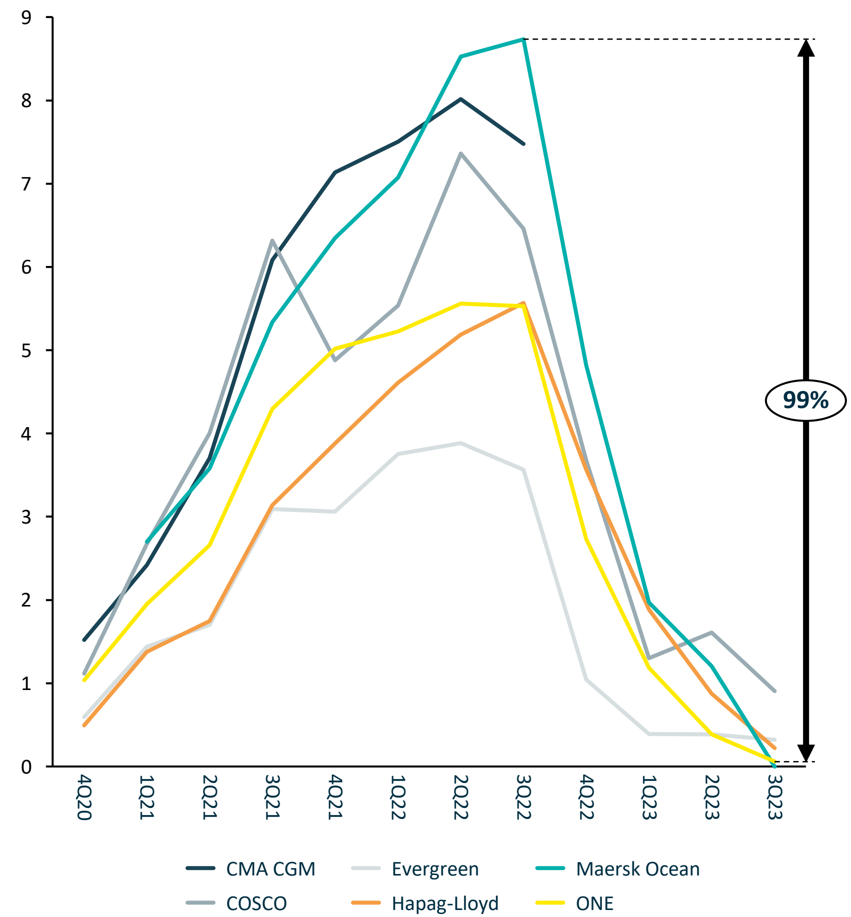
Several major shipping lines have seen high profits in 2022 – but the EBIT position in Q3 2023 is significantly lower than in Q3 2022 and worsening in 2024

- Recent shipping line financial results outline the ongoing trends impacting the ocean carrier industry:
    - From Q3 2022 to Q3 2023, total EBIT of the six lines shown has decreased -99%.
    - Maersk EBIT Q3 2023 came to 538 million, -89% relative to Q3 2022.
    - Lines bank huge revenues in 2021-22, but 2023 saw massive declines.
    - CMA CGM net profit drop from $5bn in Q4 2022 to $2.01bn in Q1 2023; COSCO $3.8bn to $1.3bn; Maersk $4.8bn to $2.0bn.
    - 2023 Q4 operating results continued same pattern with Maersk reporting loss of $920m; HL $300m and ONE $248m.
- Situation likely to worsen with more newbuild deliveries in 2024.
- Moving forward, further consolidation in the liner shipping industry is anticipated.
- The challenge for the smaller liner operator's is maintaining financial stability, especially while the major lines consider further acquisition activities.
- Shipping lines are looking for new ways to gain more revenue, with the introduction of surcharges.

Top Shipping Lines EBIT, Bn USD, 4Q2020 – 3Q 2023



Note: MSC is a private held and therefore does not have to disclose financial information

Source: Alphaliner

Investment in Vessels

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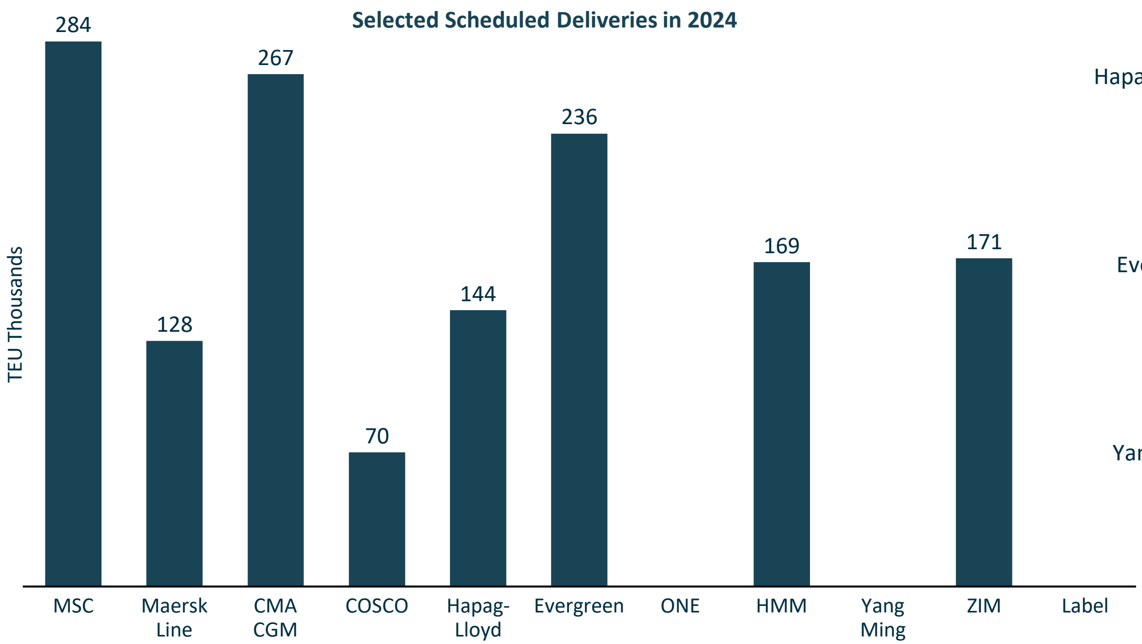
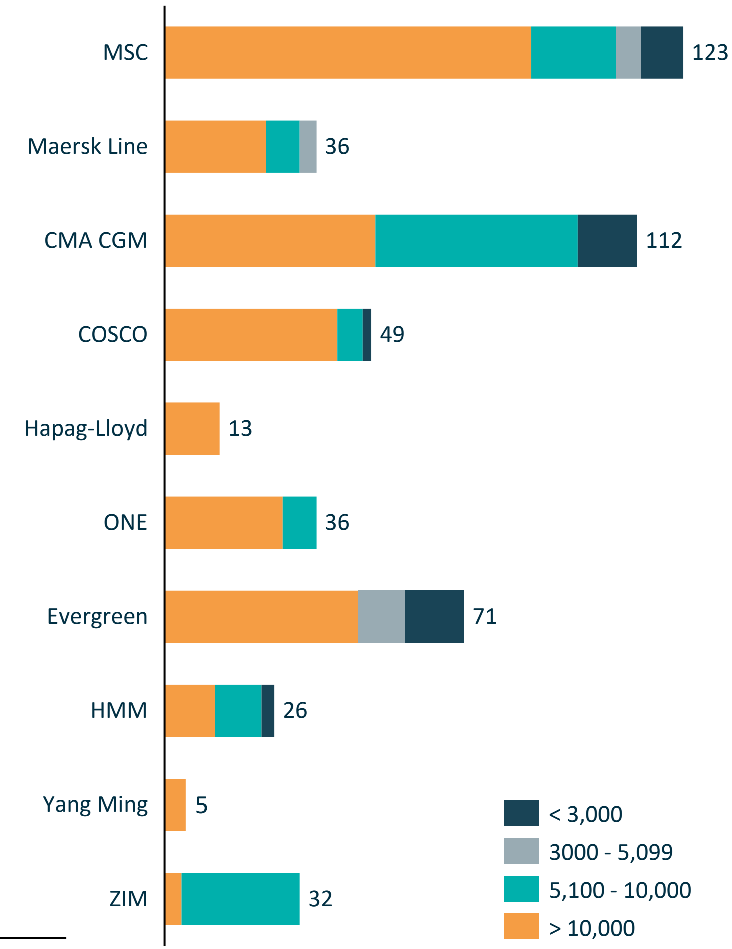
The top lines are continuing to invest in increasingly larger capacity ships with their orderbooks comprised of many ULCS orders

- An estimated 7.5 million in new tonnage is currently on order.
- Over 6.1 million of that new tonnage is for the top 10 lines. Approximately 3 million TEU is scheduled for delivery in 2024.
- There is a focus on larger ships, with 319 ULCSs on order among the top ten lines.
- In 2022, MSC received the largest ship ever built, a further increase in size to 24,346 TEU.
- MSC and CMA CGM have the largest orderbooks, with a significant number of megamax ships on order.



Source: Alphaliner

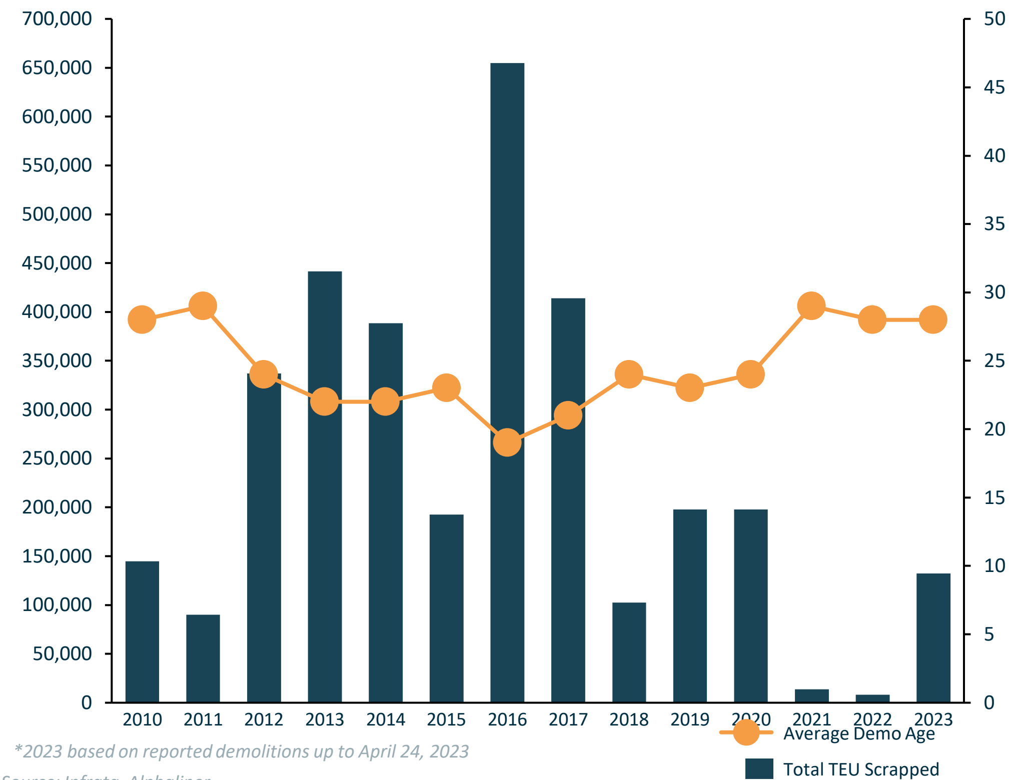


Demolitions

In 2021-2023, ship demolitions significantly declined - the highest average demolition ship age was recorded since 2011

- Less than 25,000 TEU was reportedly scrapped in both 2021 and 2022 combined, which is significantly lower than previous years. As of December 2023, about 132,116 TEU has been scrapped throughout the year.
- Ships with smaller TEU capacities and older ages are more likely to be scrapped. Since 2010, there have been no ships above 7,500 TEU scrapped. In 2022 and 2023, the average age of ships scrapped was 28 years. These are the highest average demolition ages since 2011, when it was recorded as 29 years.
- With the large orderbook tonnage expected to join the global fleet between 2023-2025, demolition will be essential to mitigate overcapacity risks; however, with an average age of approximately 13.5 years, there may not be enough tonnage deemed 'scrapable'. Inevitably, the imminent EEXI and CII carbon regulations to be introduced in 2023 will force some older and less efficient ships to be scrapped.

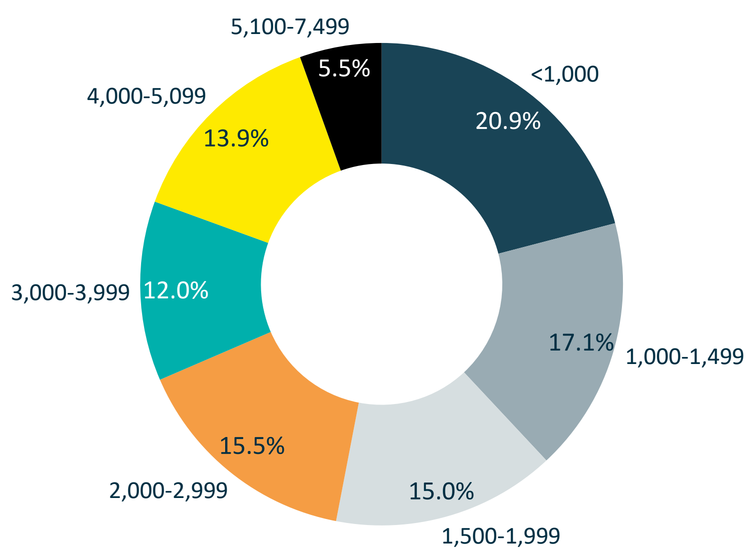
Total Scrapped TEU



**2023 based on reported demolitions up to April 24, 2023*

Source: Infrata, Alphaliner

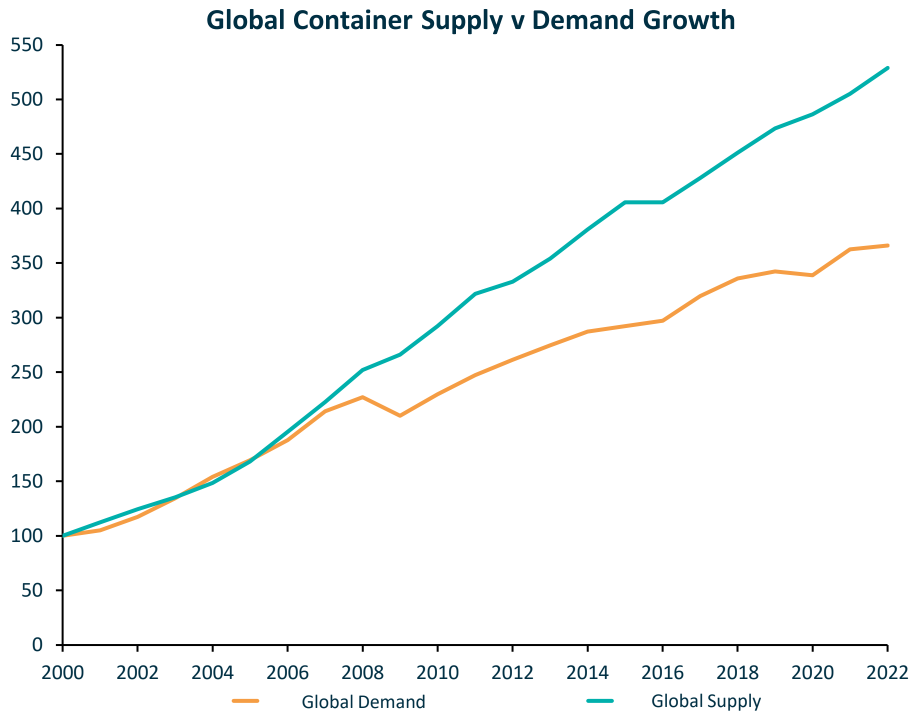
Scrapped Ships by Size Range 2010-2022

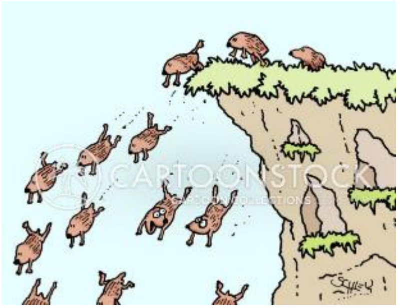


Global Container Supply v. Demand

New orders of ULCSs by Shipping lines as a result of huge profits at same time as global demand (especially from China) stagnates

- Continuation of large orders of vessels as a result of huge profits for the major shipping lines.
- Supply increases with the order of new ULCSs, global demand has stagnated creating a wide gap between supply/demand.
- With increased tonnage available, lines will have to look at different ways to ensure that they are still able to fill their vessels and take advantage of the economies of scale.

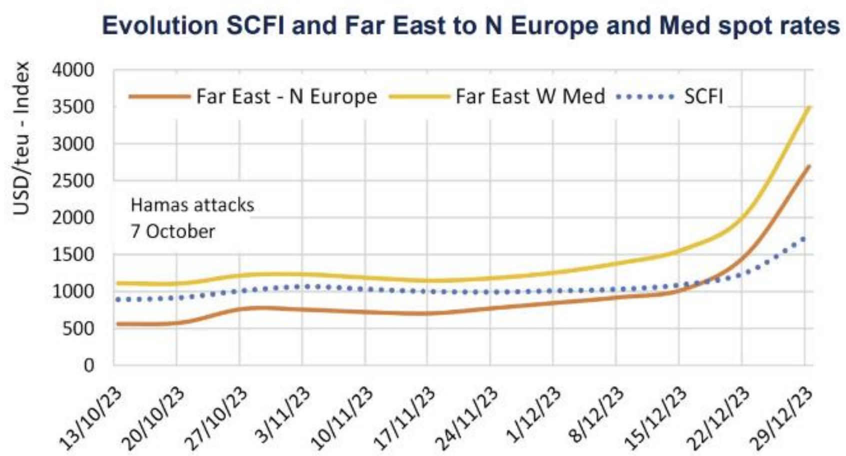




Smoke & Mirrors

Lines are using many different measures to ensure that they can deal with their self-inflicted increase in capacity from 2024 onwards.

- Shipping lines are taking multiple courses of action to protect themselves against over capacity and potential drops in rates. They can:
  - Artificially decrease capacity by suspending services / laying up vessels – not seen as a “long term” fix.
  - Issue rate increases when capacity has been reduced to help “push” rate increases through.
  - Various surcharges are also being introduced to help protect “bottom line” rate levels. Graph shows increase in rates as a result.
  - Demolish old tonnage where possible.
  - Slow steam.
  - Form new VSAs to give other lines access to their services to help vessel utilization.
  - Add calls to rotations so that additional demand is collected but also “spare” tonnage is utilized. This has the bonus of saving some feeder costs , where charter rates for small vessels are increasing for the coastal route.
  - Avoid Suez Canal and route via Cape of Good Hope.



- The reality is that lines will use a combination of all these things to protect themselves during 2024.
- The next slide highlights some typical schedule change examples.

Source: Alphaliner

Examples of Planned Liner Action – Additional Calls

Lines are using many different measures to ensure that they can deal with the increase in capacity from 2024 onwards.

- In December, THE Alliance (HL, ONE, HMM and YML) announced that in 2024 they will deploy additional tonnage to ensure a comprehensive coverage and provide a more reliable service schedule.
- What this means:
  - More slow steaming to add additional tonnage to services and save fuel costs.
  - More calls in different markets to increase vessel utilization and use up “spare” tonnage.

- Other lines have announced various extra calls at Damietta, London-Gateway, Jeddah, Colombo, Haiphong and Manzanillo as well as extending services to cover Pakistan, Vietnam and California.
- Expect more additional calls to help fill vessels and also use “spare” tonnage. Ports in Middle East and ISC remain likely options given growth in demand in these regions compared to Asia (China). Jebel Ali, Jeddah and Colombo remain plausible.
- Other likely East-West markets include Japan, Indonesia, India, Pakistan.

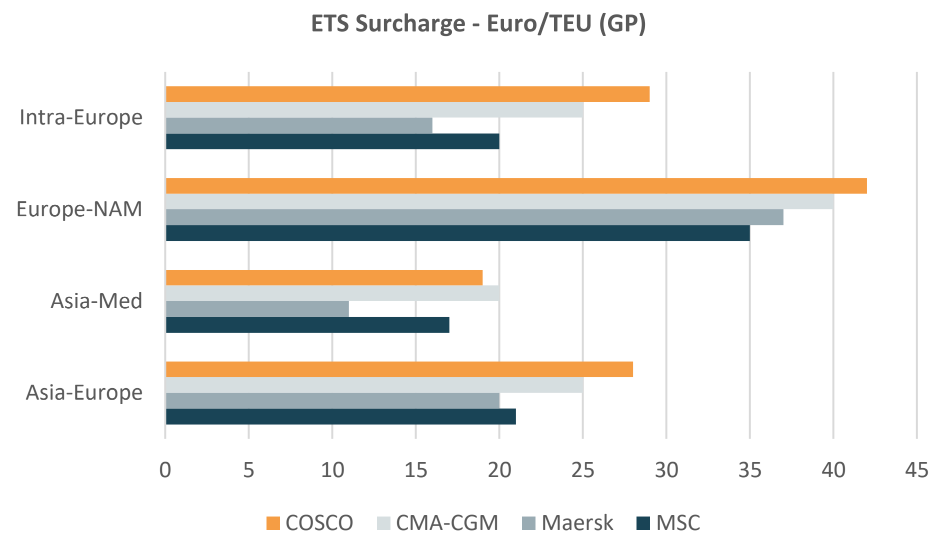
- Change of route to avoid Suez Canal also offers potential opportunities for calls in South Africa, provided that ports can improve their performance:
  - Possible transshipment opportunity to Europe if calls end rotation in SAF and return to Asia.
  - Possible extra calls to help fill vessels to Europe.

Surcharges – More Smoke & Mirrors? Pragmatic/Lucky Lines

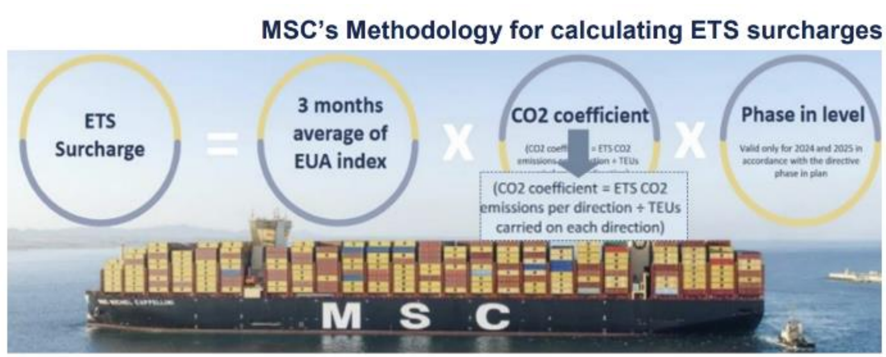
Lines are introducing PSSs and ETS surcharges and like CABAFs before them, the argument is whether they are justified or just an attempt to increase revenues?

- **Emergency peak surcharge (PSSs)** is to be levied by lines who are looking to avoid the Suez Canal region because of drone strikes resulting from the Israel conflict. ONE Alliance have advertised $500/TEU on Asia-Europe service to cover fuel costs for +3,000nm to go around the Cape of Good Hope. Zim, H-L, Maersk, MSC, CMA-CGM, HMM, Evergreen and YML are likely to follow. An extra 5-9 days transit will require additional tonnage.

- **ETS (Emissions Trading System)** surcharge aimed at reducing carbon emissions. Charges effective 1 January 2024.
- MSC have explained that their surcharges are calculated based on the tons of CO2 emitted by a vessel, divided by the TEUs shipped. The result is then applied to the average 3-month price of the EU Allowance index, multiplied by the phase-in level, i.e. 40% in 2024; 70% in 2025 and 100% in 2026.
- No other lines have explained the logic of their calculations, here shown.
- It has been extremely “convenient” for lines to stop calling at the Suez so that they can both increase the ETS and PSS charges as well as add “spare” capacity to the rotation.
- Lines have been quick to take advantage of this situation, which some might say is pragmatic and others say it is lucky to help lines solve their over capacity challenge.



Source: Alphaliner



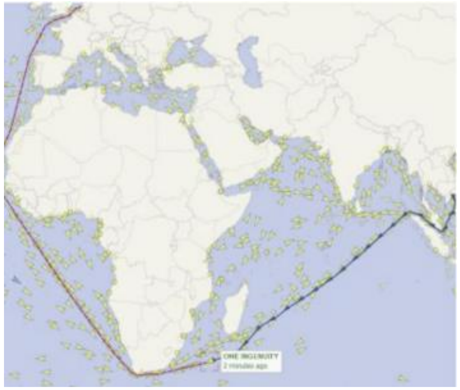
Impact of Schedule Changes – Suez Canal Omission

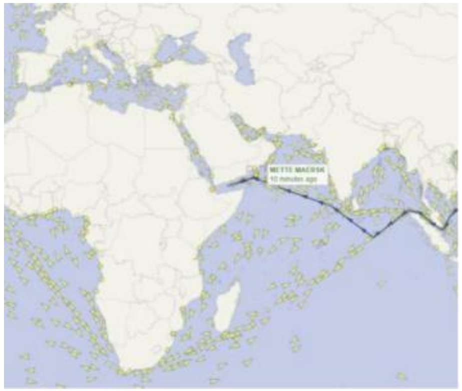
Finally, all container shipping lines have taken the decision to divert voyages away from the Red Sea and potential pirate attacks and instead of transiting the Suez Canal are sailing around the Cape of Good Hope

Shippers Perspective

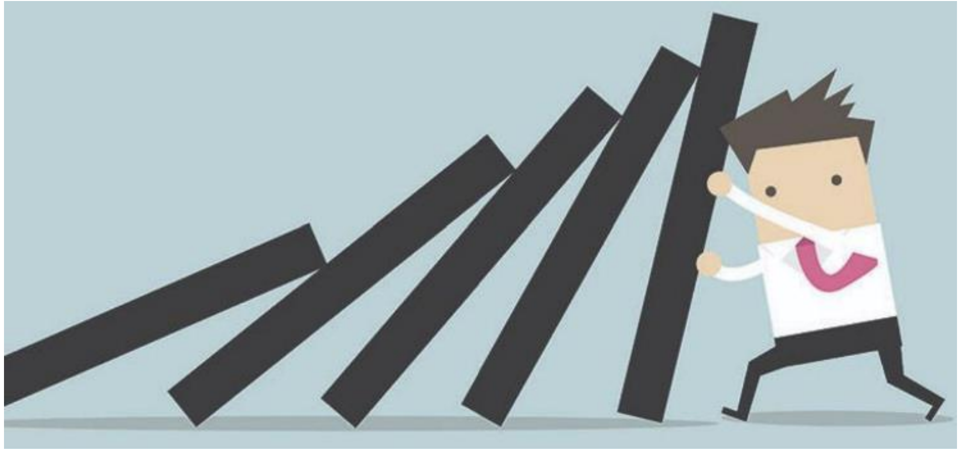
- Suez transits are down 67% YOY and now all shipping lines are avoiding the area.
- Shippers can always choose who to book with, but have the potential dilemma in the future of:
  - A longer transit time (8-10 days) if Suez Canal and Red Sea is deemed safe again or of using the Cape option.
  - Unpredictability of using Suez Canal if it still isn't safe and last-minute changes are made.
- If shippers choose to use the "safer" option of the Cape of Good Hope, then they can expect serious cargo time delays, but at least the new ETA's are unlikely to change. Additional ETS are likely given a longer route. Potential serious impact on supply chains.
- The "usual" Suez transit option is expected to remain unpredictable for the next month or so, but if Suez transit proves to be uneventful, then the total transit times will remain the same, with same advertised arrival times, but costs will increase due to PSSs and some ETS as discussed previously.
- Cost of goods will increase and be passed over to shopper.

Route Options – January 2024





Supply Chain Resiliance



Impact of Schedule Changes – Suez Canal Omission
…and South African opportunity

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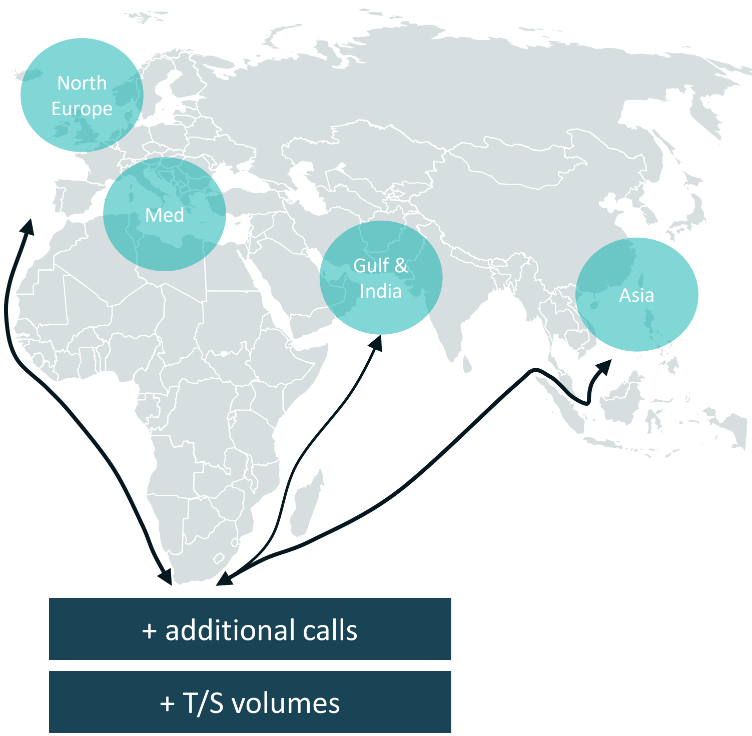
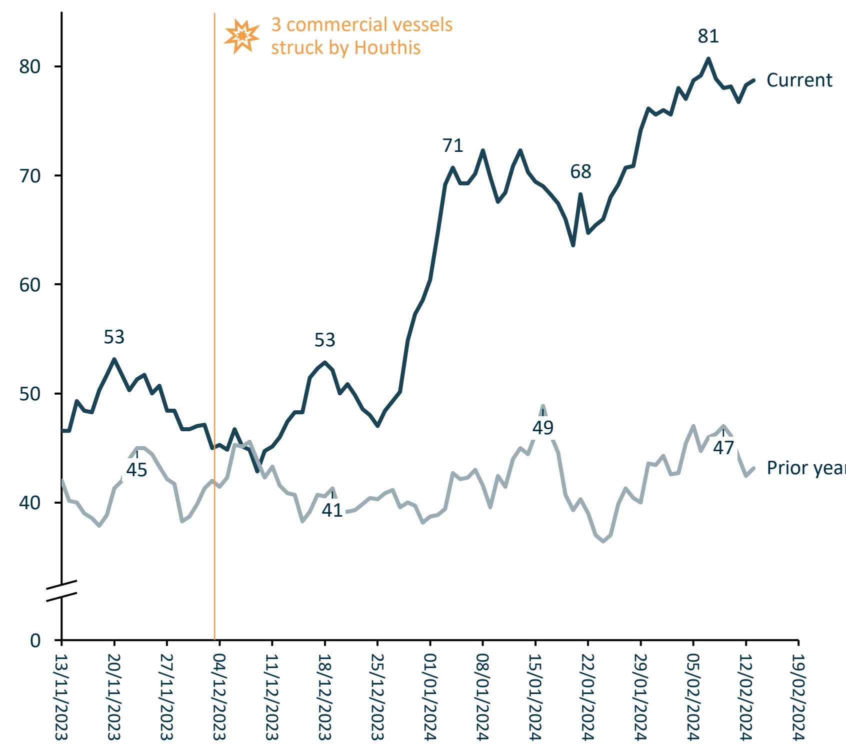
The increase in vessel traffic via Cape of Good Hope is an opportunity for South African ports, with potential increase in calls and offering a strategic location for T/S volumes to/from Europe-Asia

Rational for the potential increase in volumes/calls in South African ports



Cape of Good Hope daily transit calls, 7-day moving average, 11/2022 to 02-2023 & 11/2023 to 02-2024



Change of route to avoid Suez Canal also offers potential opportunities for calls in South Africa:

- Possible transshipment opportunity to Europe if calls end rotation in SAF and return to Asia.
- Possible extra calls to help fill vessels to Europe.

Source: IMF | Port watch

Impact of Schedule Changes – Suez Canal Omission …and South African ~~opportunity~~ congestions – A Missed Opportunity

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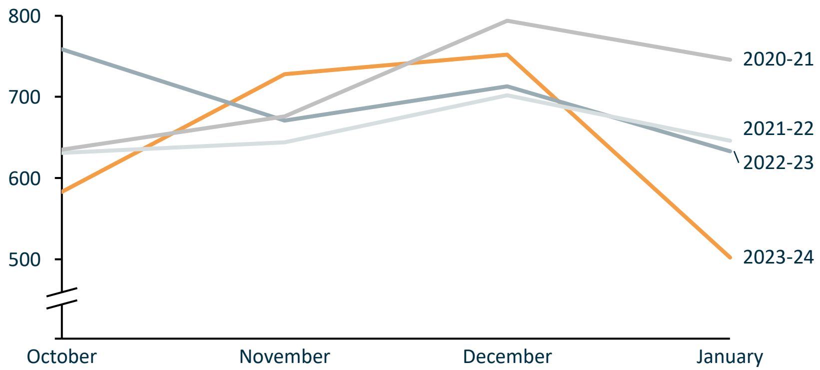
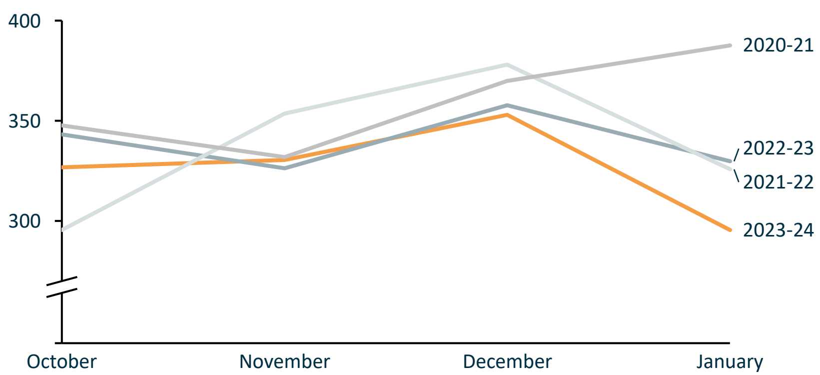
The historical performance of South African ports, compounded by recent congestion issues in Durban due to weather and malfunctions, hampers their ability to capitalize on the current situation

Port calls in South African ports, #, October to January 2020 to 2024



Monthly volume of containers in South African ports, ‘000 TEUs, October to January 2020 to 2024



- Performance in South African ports has been in decline for a few years already.
- Shipping lines have started to implement a congestion surcharge for some South African ports and services.
- South African ports consistently rank poorly on the Container Port Performance Index (CPPI). Their three main ports have placed among the bottom ten ports in the CPPI reports, except for Port Elizabeth in 2022.

CPPI ranking	2020	2021	2022
Durban	351	363	341
Cape Town	347	364	344
Port Elizabeth	348	317	291
Number of ports	351	370	348

- In November 2023, Durban Port faced significant congestion issues, attributed to equipment underinvestment and adverse weather conditions, according to Transnet. Port officials suggested that clearing the congestion at Durban's container port could take until 2024, possibly extending into February.
- Lack of port performance has hampered the ability of South African ports to capitalize on the opportunity created by the Suez Canal disruptions.

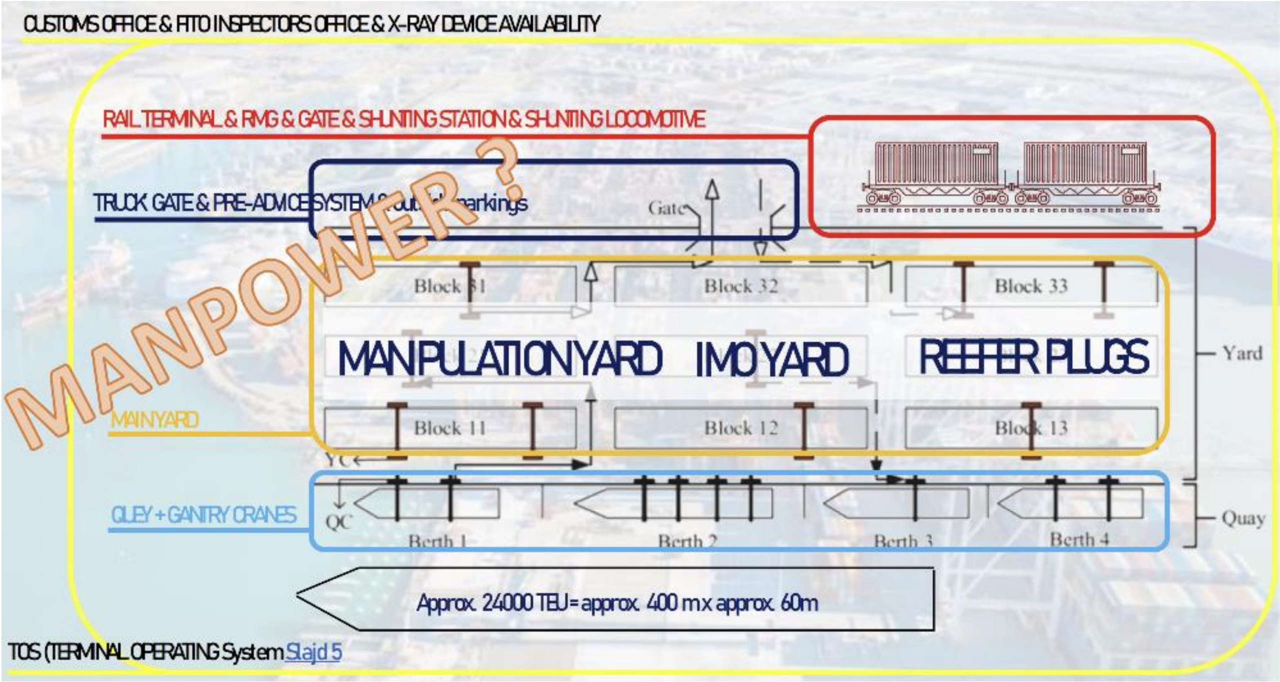
Source: Transnet (South Africa national ports authority), World Bank Group, Industry news

Impact of Schedule Changes – Suez Canal Omission

Shipping lines have taken the decision to divert some vessels away from the Red Sea and potential pirate attacks and instead of transiting the Suez Canal are sailing around the Cape of Good Hope

Port Operators Perspective

- Last minute port omissions in the event of a change of route can adversely affect the financial performance of a port/terminal.
- Last minute additional calls, especially at transshipment hubs can positively affect ports involved in terms of increased volume/revenue.
- Last minute additional calls can lead to challenges as far as berthing windows and port planning are concerned – may lead to longer than usual port stays / delays.



Impact of Schedule Changes – Suez Canal Omission

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Shipping lines have taken the decision to divert some vessels away from the Red Sea and potential pirate attacks and instead of transiting the Suez Canal are sailing around the Cape of Good Hope

Shipping Lines Pragmatic view – avoiding Suez Canal

- Great Public Relations – avoiding "war zone" to protect everyone's goods.
- Save $'000s (c.$0.5 million) by not transiting the Suez Canal – off-set with some additional fuel costs etc. ($1 million) of longer transit.
- Able to use more "spare" tonnage that lines have created with latest round of newbuild purchases on the back of big profits.
- Charge additional surcharges for additional emissions and/or peak surcharges (PSSs) – extra revenue.
- Artificially reduce available capacity.
- Increase sea freights on spot markets.
- Possibility of extra calls in South African ports to "top up" volumes to Europe and to bunker.

The Devil's Advocate View

- Shipping lines need to utilise "spare" tonnage.
- Bulkers are still transiting the Canal.
- Geo-politically not acceptable to continue avoiding Red Sea due loss of Trade in region.
- Surcharges and higher sport rates will all contribute to additional revenues.
- Rate increase in time for Chinese New Year expected surge in demand.

"The Devil's Advocate"

Conclusions

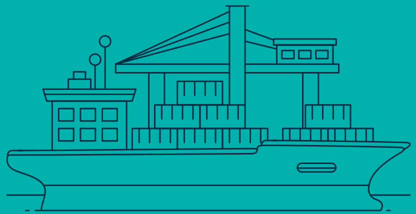
1 Services from the Far East may stop at additional ports in the short-term to ensure that vessel capacity is fully utilised and “spare” tonnage used. Potential for extra calls in South Africa on vessels going around the Cape ONLY IF port performance improves.

2 Bigger ships offer opportunities for more transshipment in the longer term and more additional calls in general in order to maximise the utilisation of assets deployed

3 Expect shipping lines to continue to be “inventive” to offset the pressure on additional vessel capacity (supply/demand issue) and freight rates – New Routes such as Suez Canal omission /Extra port calls / Demolitions / Lay-Ups /Slow steaming / Surcharges etc.

4 Longer term - Increase in the incidence of transshipment will see a requirement for larger feeder vessels, so vessels serving outports will also see an increase in vessel size and volumes

5 Geo-politically it would seem unlikely that the issue in the Red Sea will be allowed to continue too long, although predicting the duration of the crisis is impossible.



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