

Exclusive Report

The fleet operating in opaque markets - one year since the EU import ban

This presentation has been compiled
under the guidance of

Exclusive Report
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Defining the 3-tier fleet

Vortexa classifies the global fleet as a 3-tier system, and this report focuses on tankers operating solely in tier 2 and tier 3

Tier 1

- Tankers with no involvement in sanctioned markets

Tier 2

- Tankers operating in the Russian crude trade since 5-Dec-22
- Tankers operating in the Russian product trade since 5-Feb-23
 - This involves tankers regardless of whether they adhere to the price-cap mechanism or not

Tier 3

- Tankers operating in the Iranian and/or Venezuelan trade (crude/DPP/PPP)
 - Excludes tankers with sanctions waivers
 - Excludes coastal and intermediate tankers
 - Excludes gas carriers

Flows & Fleet Analysis

The opaque players crude exports reach 4-year high, accounting for a growing share of global crude exports

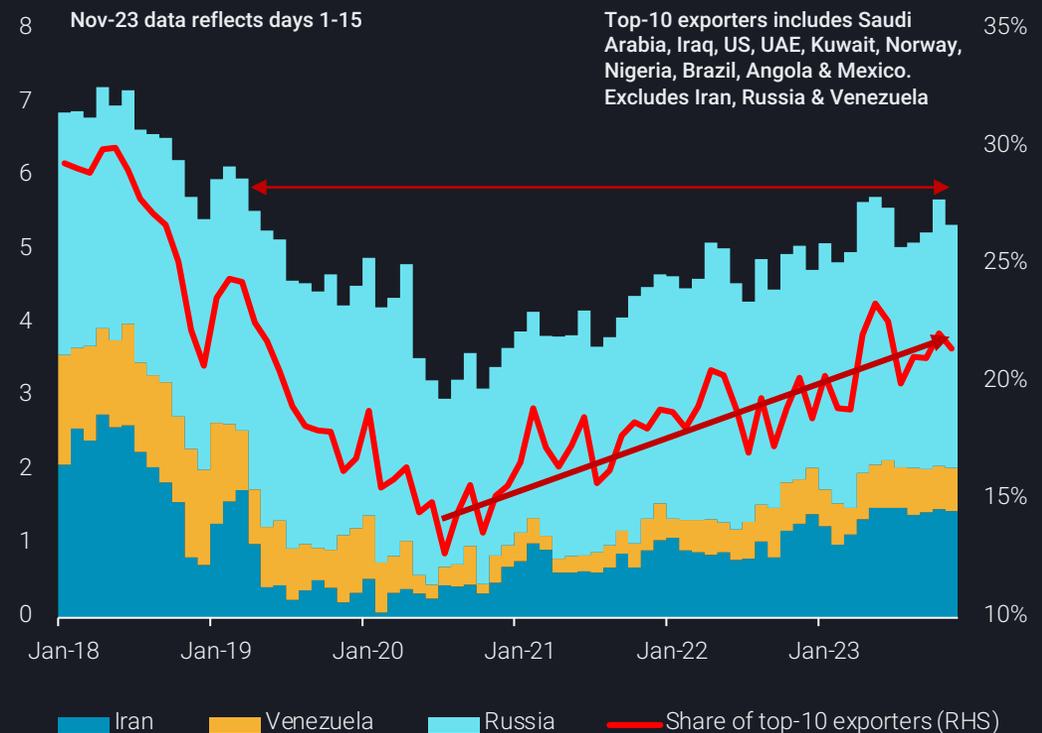
Iran, Russia and Venezuela's (opaque market) combined crude exports reached 5.7mbd in May, a 4-year high and a 15% increase y-o-y. The opaque markets crude exports averaged 5.2mbd in 2023, a 500kbd increase y-o-y, an increasingly important market to global crude supply

This 4-year high was driven by record-high Iranian crude/condensate exports and Russia increasing its crude exports despite sanctions

- Iran's crude/condensate exports surpassed 1.5mbd in May, driven by strong demand from China and increased production
- Russia increased its crude exports (excl. CPC Blend & KEBCO) to 3.6mbd in May, despite the EU import ban and OPEC+ cuts
 - Russia found alternative buyers - India accounts for 50% of Russian crude imports in 2023, compared to 20% in 2022
 - China also accounts for 40% in 2023, a 10pp increase y-o-y
- Venezuela's exports have increased due to higher production and US increased purchases of Venezuelan crude via Chevron

The opaque market exports in 2023 account for 20% of the 10 largest crude/condensate exporters globally – the highest share since 2019

Iran, Russia (excl. transit grades) & Venezuela crude/cond. exports (mbd, LHS) vs comparison to Top-10 exporters (% , RHS)

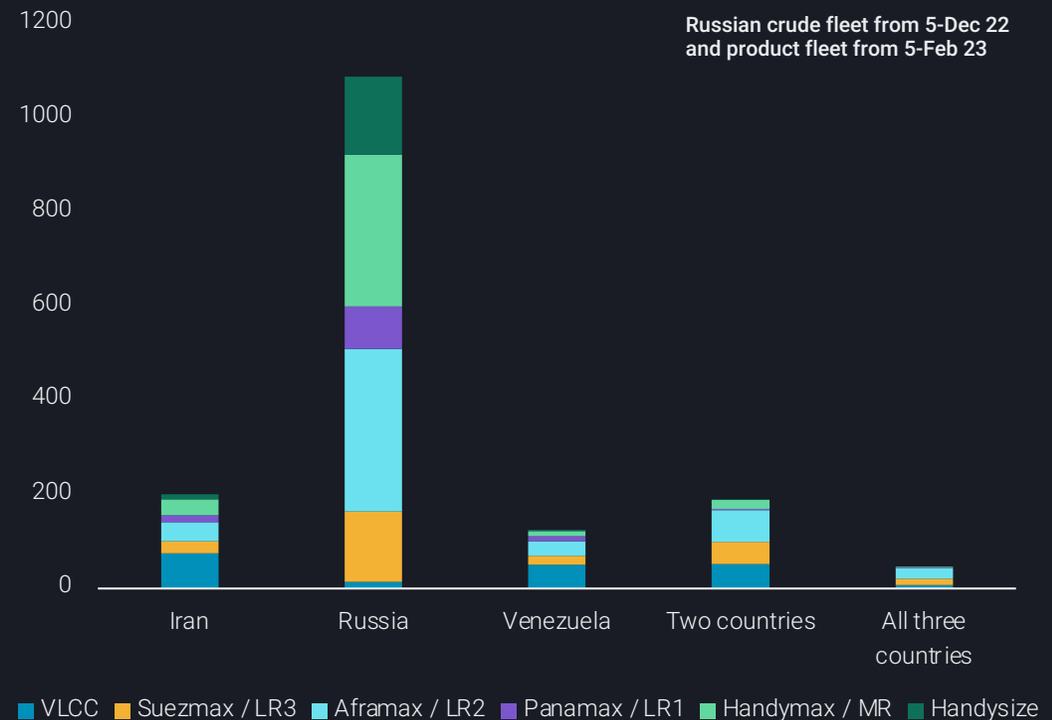


Tankers involved in Iran, Russia & Venezuela trade passes 1600, with Russian involvement accounting for 75% of the opaque fleet

Vortexa data suggests 1649 unique tankers have operated in the opaque market from Jan-2021 to Nov-2023 (days 1-15)

- Russia had 1089 tankers operate in its crude (excl. CPC Blend & KEBCO) and product trade since 5-Dec and 5-Feb, respectively
 - Tankers in the Russian trade account for 75% of the opaque fleet; this includes tankers which have operated in more than one market
 - Tankers exclusively in the Russian trade (not in Iran and Venezuela) account for 66% of the opaque fleet
- Iran and Venezuela have 201 and 125 tankers operating in only their respective trades from Jan-2021 to Nov-2023
 - Iran & Venezuela account for 20% of the opaque fleet
- There are 188 tankers which operated in two of these three countries, accounting for 11% of the opaque fleet
 - Tankers have switched from Iran & Venezuela to Russian trade and tankers switched between Iran & Venezuela
- There are also 46 tankers which have operated across all three of these markets – accounting for just 3% of the opaque fleet

Count of unique tankers in opaque markets per country of operation split by vessel class from Jan-21 to Nov-23



Opaque market tanker activity peaked in Q2 supporting 4-year high exports, but has since declined signalling a slowdown

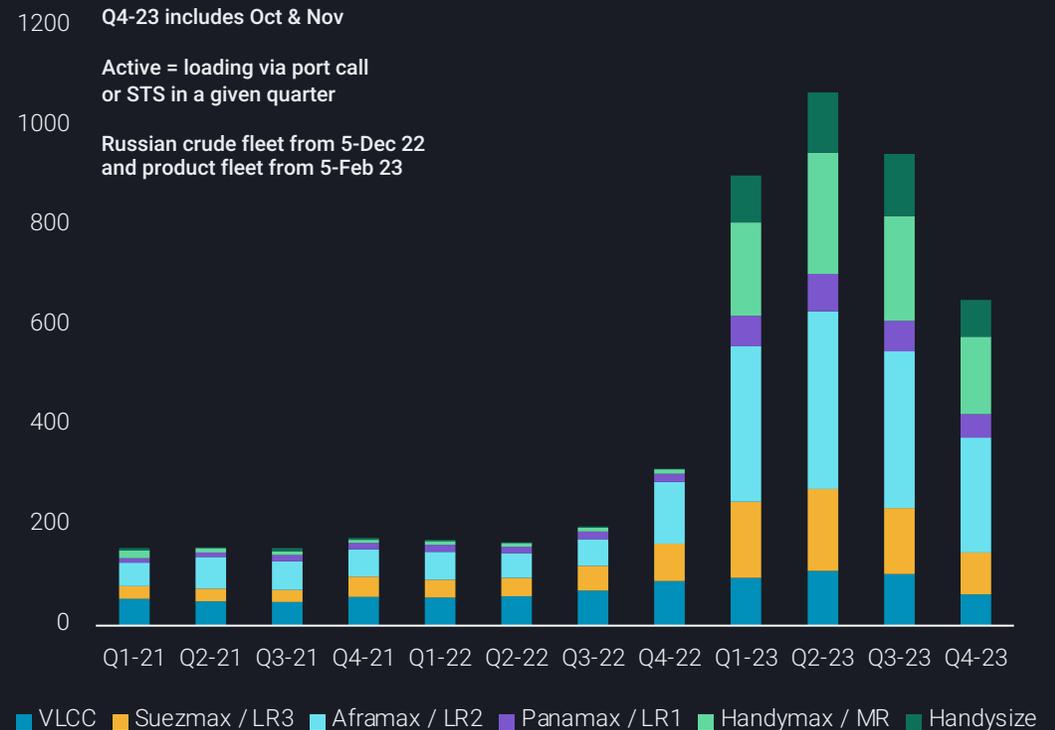
Tankers operating in opaque markets reached a record high in Q2, supporting the opaque markets 4-year high crude exports

We track 1070 tankers which carried Iranian, Russian and Venezuelan crude/condensate, DPP & CPP in Q2, a 500% increase y-o-y

- Russian crude & product carriers accounted for 80% of all opaque market tanker activity in Q2-2023
- The influx of Russian crude and product carriers since 5-Dec & 5-Feb has resulted in a surge in smaller tankers in this fleet
 - Aframaxes and smaller classes accounted for 75% of the fleet in 2023, a 30pp increase y-o-y
- Opaque market tanker activity declined 10% in Q3 (q-o-q) reflecting the decline in Iran’s crude/condensate exports and Russia’s crude and CPP exports over this period
 - Opaque market tanker activity in Q4 suggests a possible further slowdown – despite it being a 100% increase y-o-y

Opaque fleet VLCC activity peaked in Q2, with 95% of these VLCCs operating in Iran and/or Venezuela trade, reflecting the dominance of larger tankers in these two markets

Count of unique tankers active in opaque markets per quarter split by vessel class



Tankers operating in Iranian & Venezuelan trade switch to Russian trade, but 35% of these tankers switch back

We track 146 unique tankers that have loaded Russian crude and DPP since Mar-22 and previously carried Iranian and Venezuelan crude

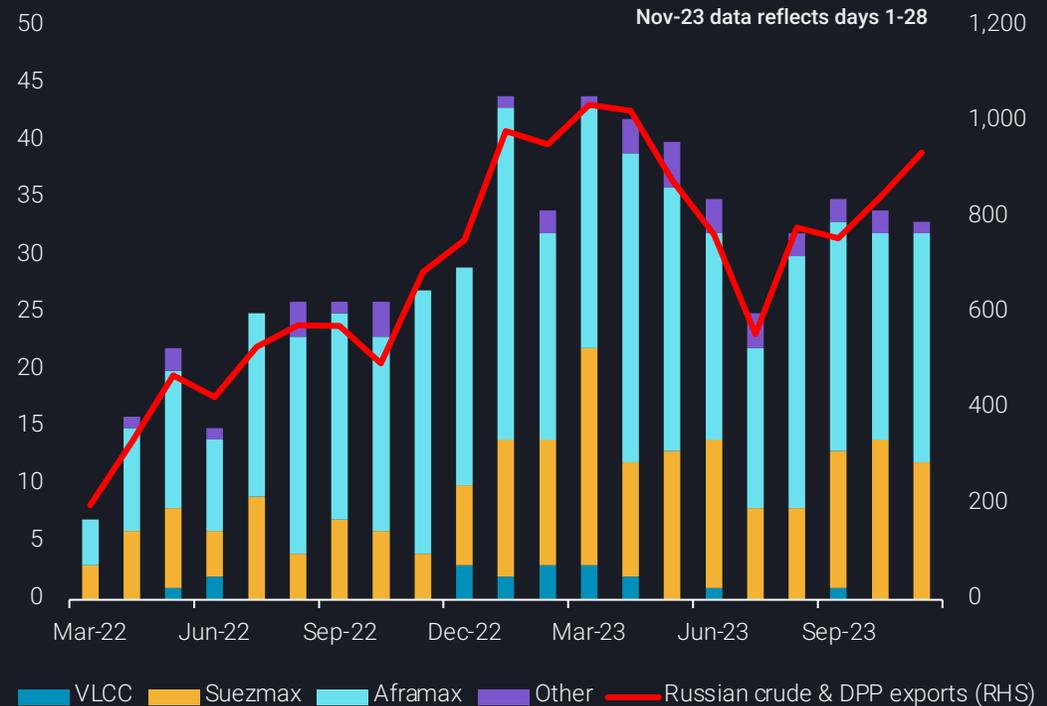
Of the 146 tankers, 73 are Aframaxes, 52 are Suezmaxes, 11 are VLCCs and 10 are other smaller classes

- Russian crude/DPP exports on carriers involved in sanctioned trade was 930kbd in November (days 1-28)
- This 100kbd m-o-m increase is driven by total Russian crude/DPP exports rising over this period compared to Q3
 - This is above the 2023 average of 850kbd, and is only 90kbd lower than the peak observed in March

Meanwhile, 53 (35%) of these tankers have also carried Iranian and/or Venezuelan crude after switching to the Russian trade

- Over 50% of these tankers are Aframaxes and 80% of the VLCCs which switched to Russian trade have switched back
- This has in part helped Iran in its effort to increase its exports, reflecting the ease at which operators can move these tankers

Count of tankers formerly in sanctioned trade carrying Russian crude/DPP* (LHS) vs Russian crude/DPP exports on these carriers (kbd, RHS)



*Excludes CPC Blend & KEBCO

US sanctions lifted on Venezuela could bring employment for up to 20 Aframax tankers per month if Chinese buyers steer clear

This scenario analysis assesses the additional tanker utilisation to be generated in the mainstream trade. All scenarios assume monthly Venezuela crude exports flat from recent levels in the medium-term

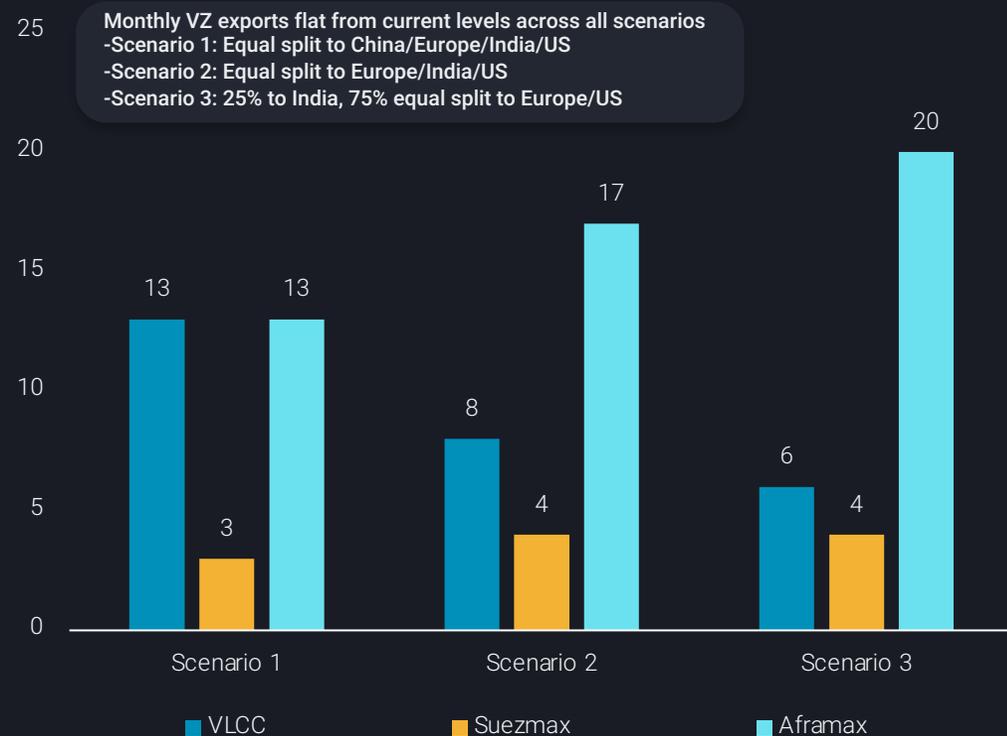
- Scenario 1: exports sail towards China, Europe, India and US (most likely scenario based on Venezuelan production ownerships)
- Scenario 2: omits China because its independent refineries (largest buyers of Venezuelan crude) could find alternative cheaper barrels from countries like Iran or Russia
- Scenario 3: like Scenario 2 but more exposure to buyers in proximity (Europe and US), facilitating higher Aframax demand

Meanwhile, 61 VLCCs, 25 Aframaxes and 19 Suezmaxes carried Venezuelan crude to China from Oct-22 to Oct-23

If scenario 2 or 3 materialise, these tankers active in the Venezuela trade will have to migrate to the Iranian or Russian trade

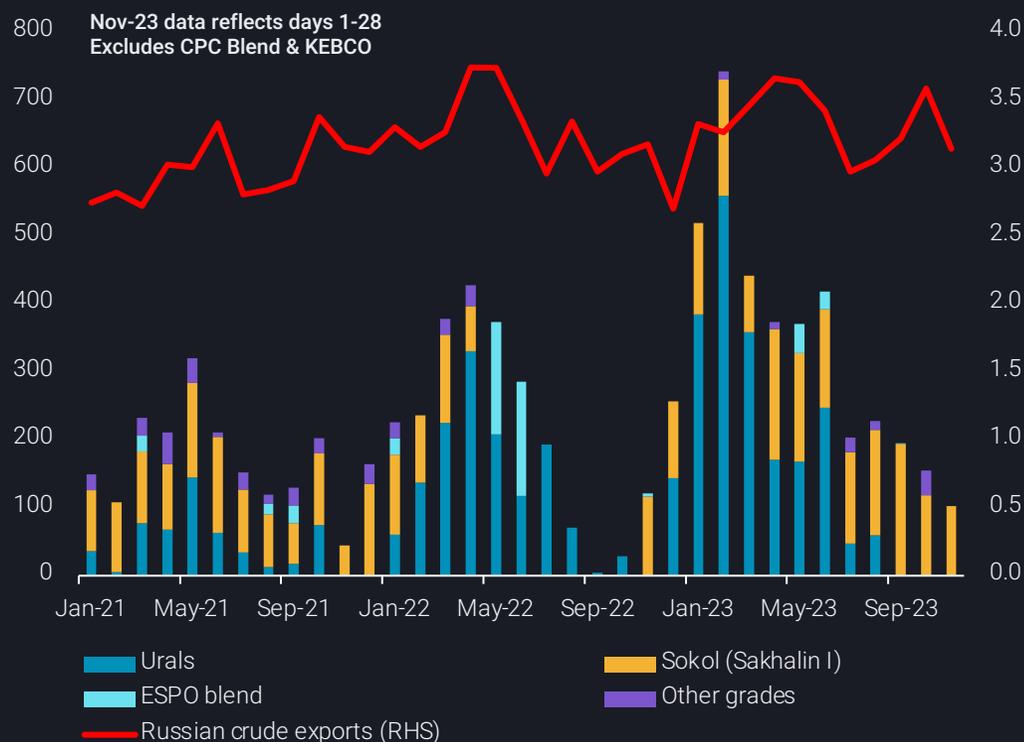
- Finding employment in the mainstream trade will be difficult
- A tonnage supply squeeze in the opaque market could trigger demolition activity if vessels can't find employment elsewhere

Monthly fleet utilisation for different scenarios generated by lifted US sanctions on Venezuela (no. of vessels)

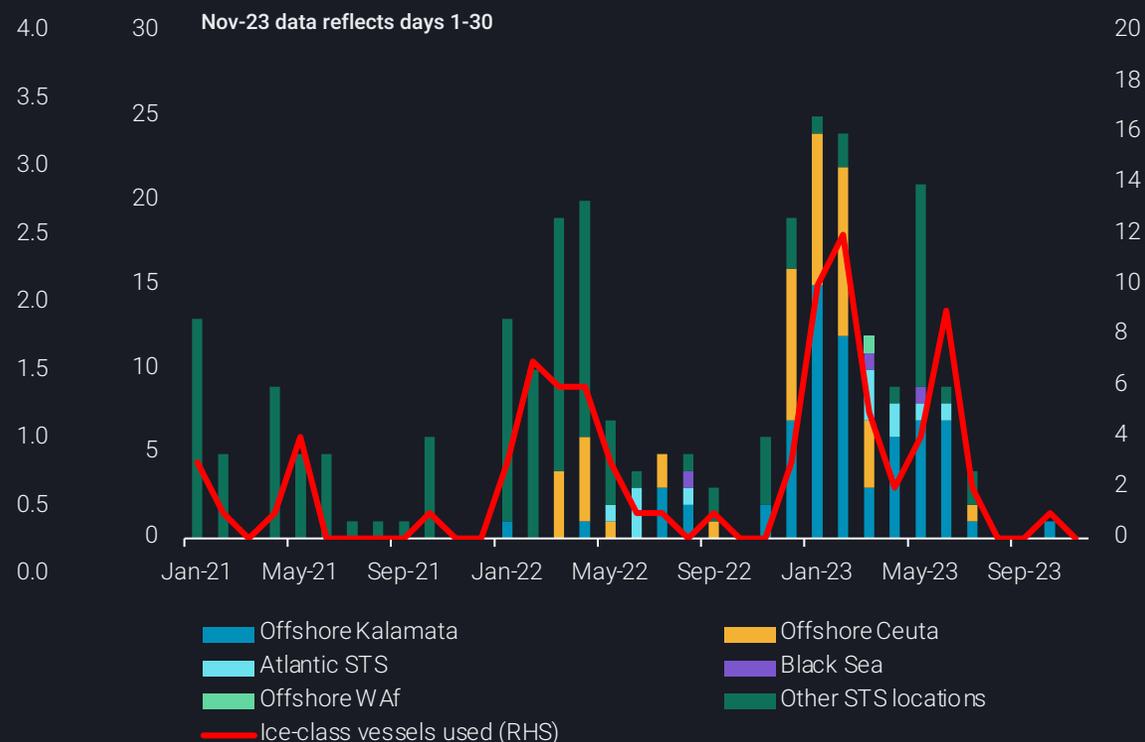


Russian crude STS activity declines to 12-month low, ice-class utilisation suggests Urals STS operations may resurge in Q1 2024

Russian crude STS transfers by grade & transfer month (kbd, LHS) vs Russian crude exports (mbd, RHS)

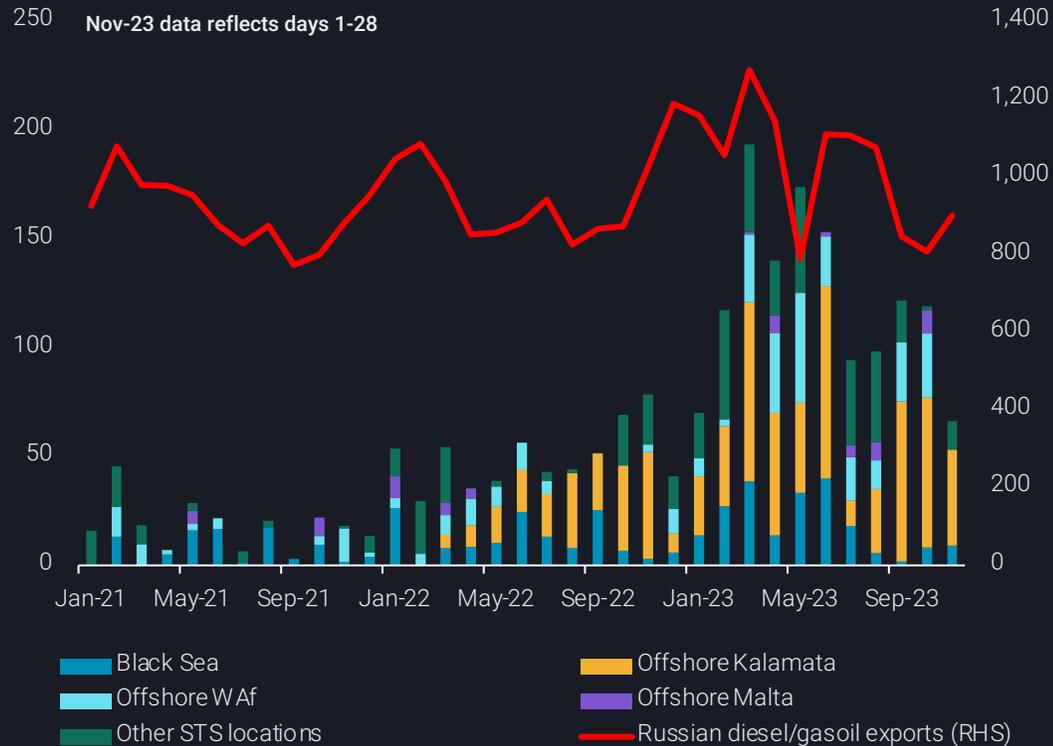


Russian Urals STS operations per location (no. of operations, LHS) vs Ice-class vessels utilised (no. of vessels, RHS)

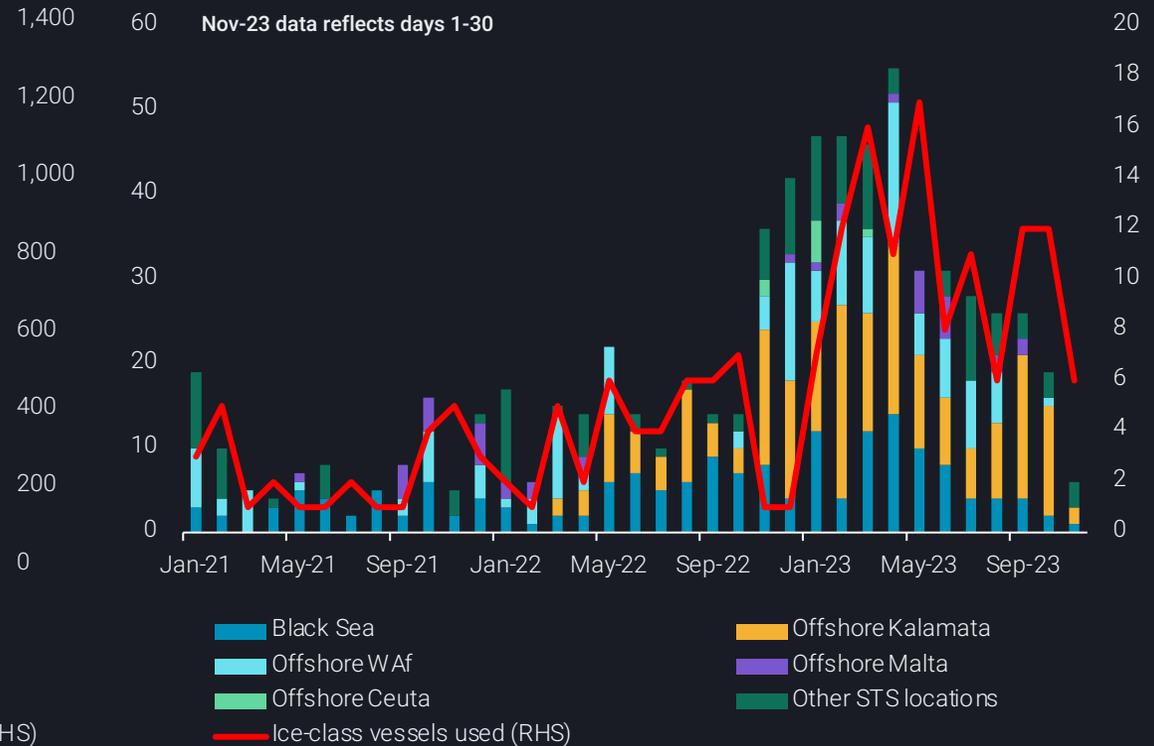


Russian diesel STS operations are declining, with ice-class utilisation falling to lowest levels since the EU ban

Russian diesel/gasoil STS transfers by location & transfer month (kbd, LHS) vs Russian diesel/gasoil exports (kbd, RHS)



Russian diesel/gasoil STS operations per location (no. of operations, LHS) vs Ice-class vessels utilised (no. of vessels, RHS)



Diverging trends in recent months' mileage indicate tankers are ballasting to other destinations, likely wary of sanctions

Laden voyage mileage for tankers carrying Russian crude and ballast voyage mileage after discharging Russian crude (nmi)

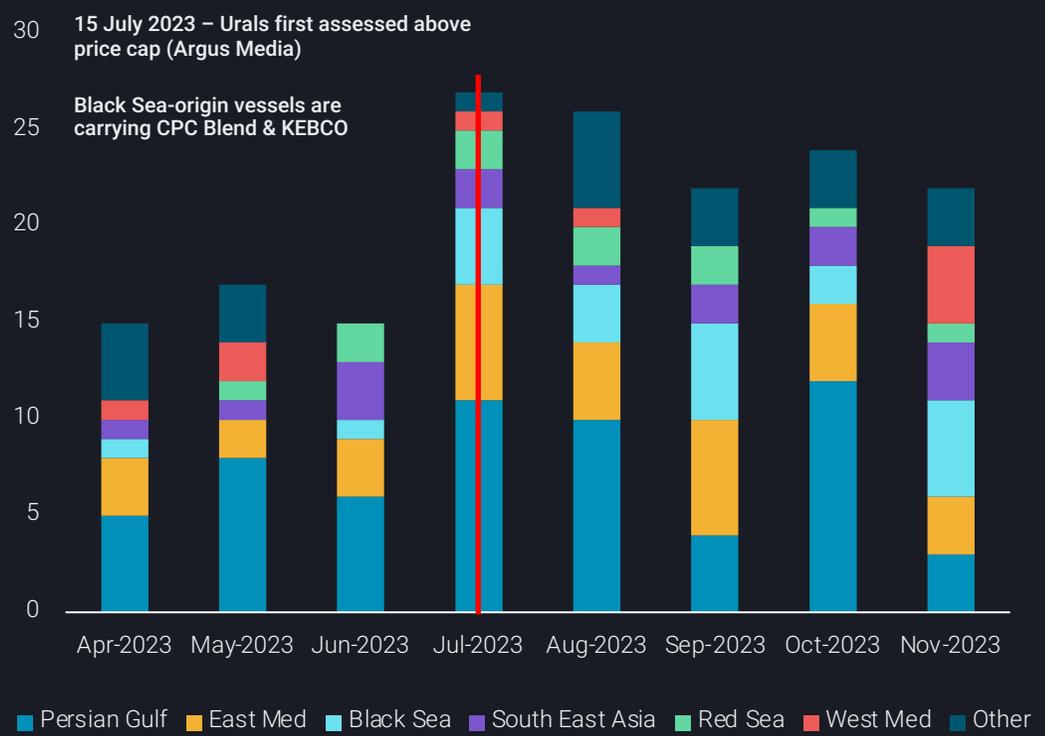


Laden voyage mileage for tankers carrying Russian CPP and ballast voyage mileage after discharging Russian CPP (nmi)

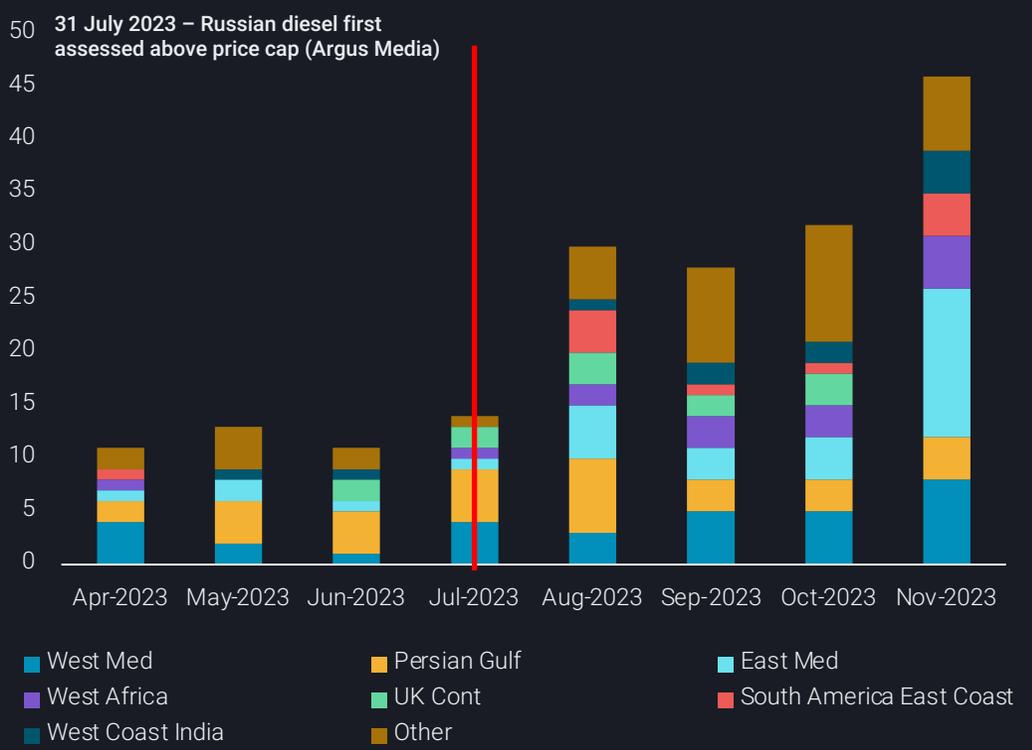


Russian Urals & diesel price cap breach results in growing numbers of tankers leaving the trade; mostly to PG & East Med

Unique tankers which have left Russian Urals trade per alternative shipping region (no. of vessels)

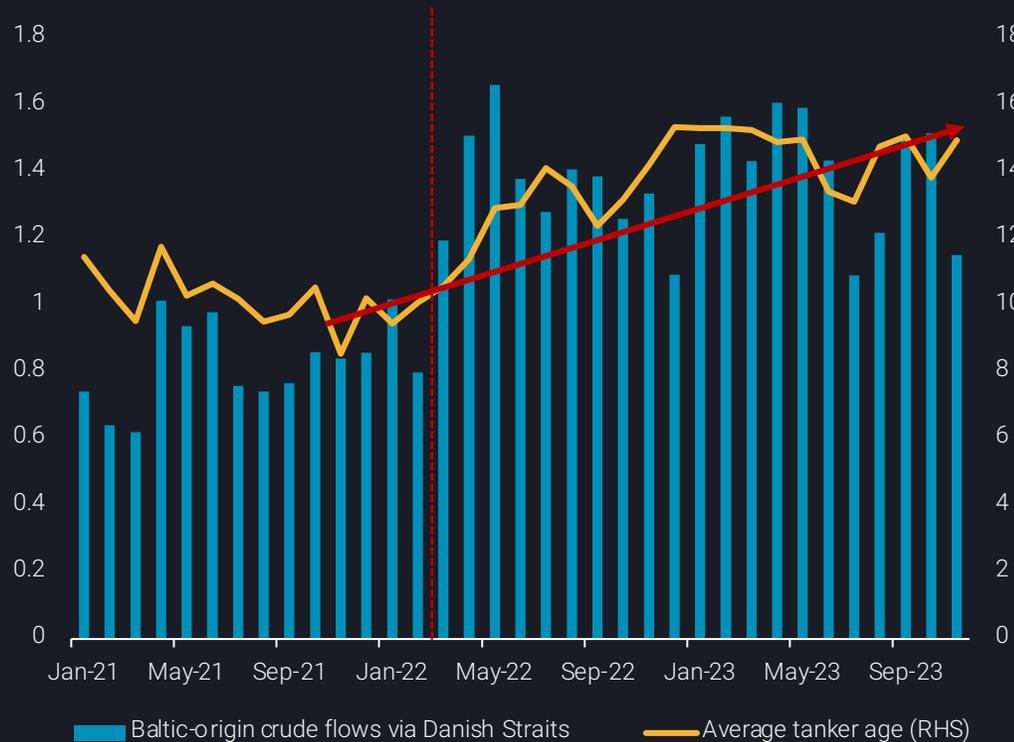


Unique tankers which have left Russian diesel trade per alternative shipping region (no. of vessels)

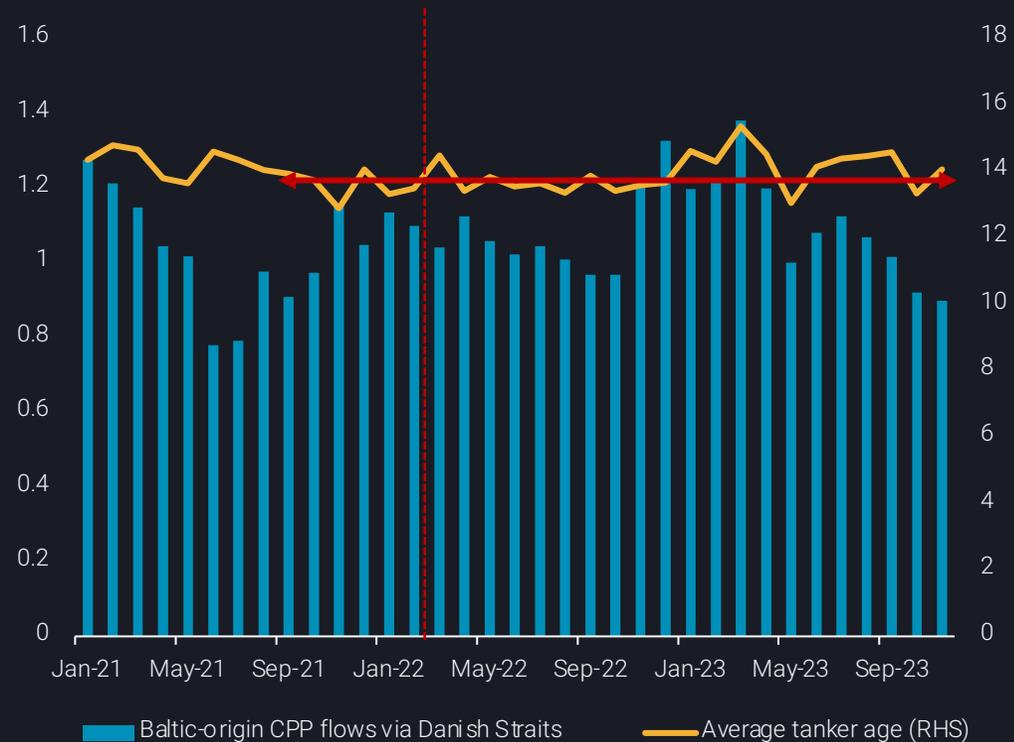


Danish straits: age of transiting crude tankers is of concern and may enable further EU sanctions; CPP tanker age unchanged

Baltic-origin sanctioned crude flows via Danish Straits (mbd, LHS) vs Respective average tanker age (years, RHS)



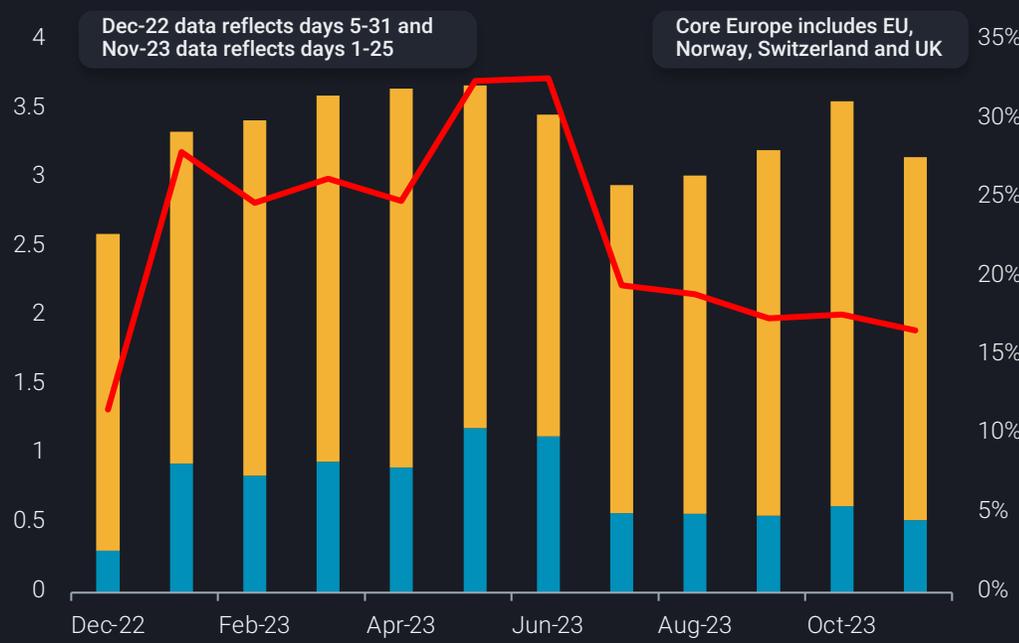
Baltic-origin sanctioned CPP flows via Danish Straits (mbd, LHS) vs Respective average tanker age (years, RHS)



Fleet Profile

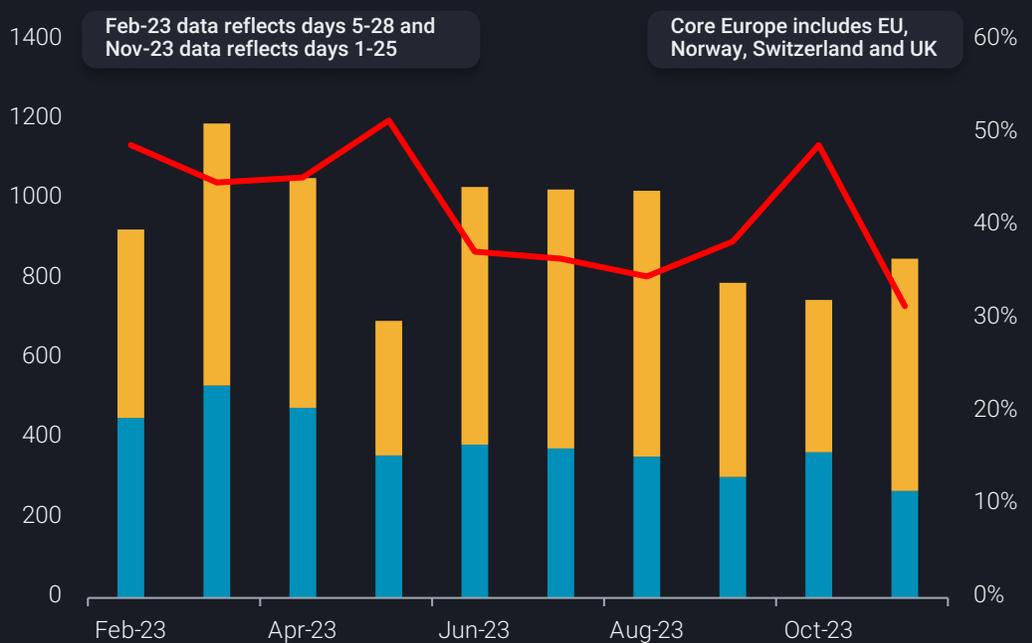
European operators reduce involvement in Russian crude & CPP trade, likely from fear of tougher price cap enforcement

Russian crude exports post-EU import ban by vessel operator (mbd, LHS) vs Core Europe-operated share (% , RHS)



■ Non-Core Europe-operated cargoes (LHS)
 ■ Core Europe-operated cargoes (LHS)
 — Core Europe-operated share (RHS)

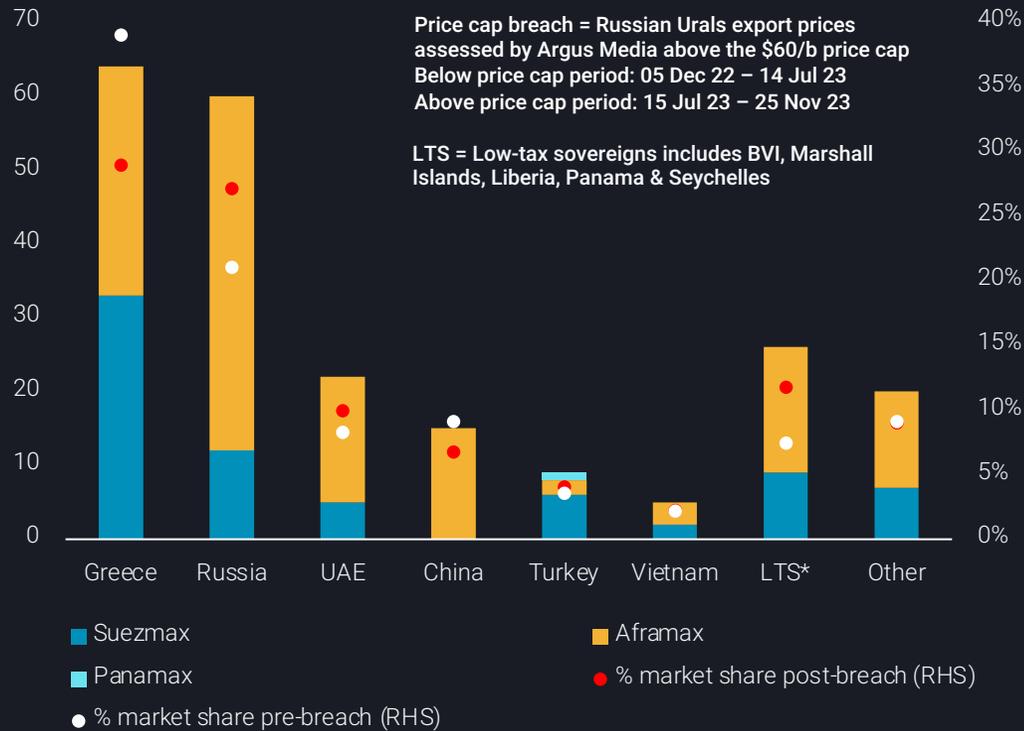
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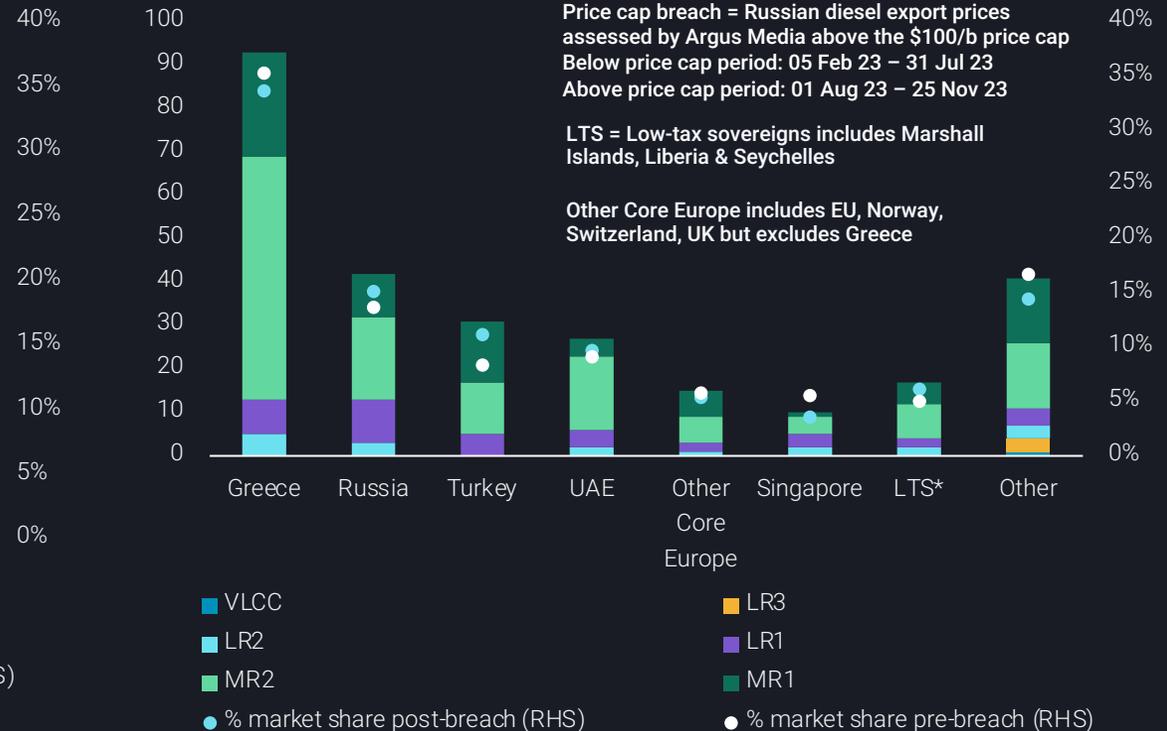
■ Non-Core Europe-operated cargoes (LHS)
 ■ Core Europe-operated cargoes (LHS)
 — Core Europe-operated share (RHS)

European operators reduce Russian Urals trading after “price-cap breach”, Russia & low-tax sovereign operators share rises

Fleet post-Urals “price cap breach” by operator nationality (no. of vessels, LHS) vs Market share below & above price cap environments (% , RHS)

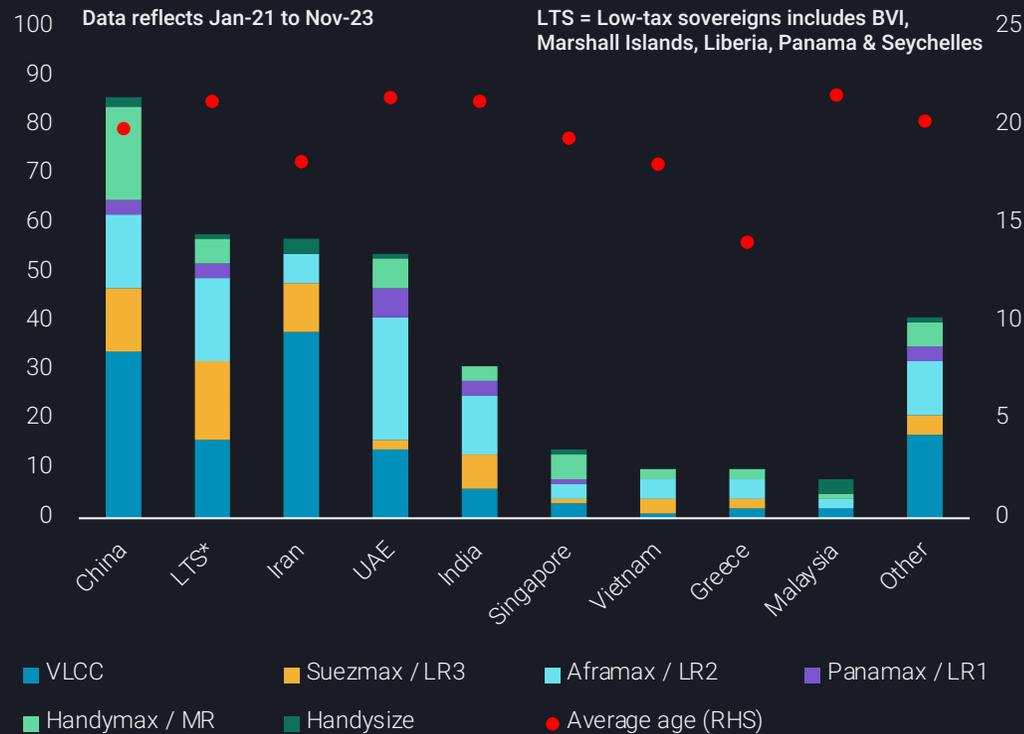


Fleet post-diesel “price cap breach” by operator nationality (no. of vessels, LHS) vs Market share below & above price cap environments (% , RHS)

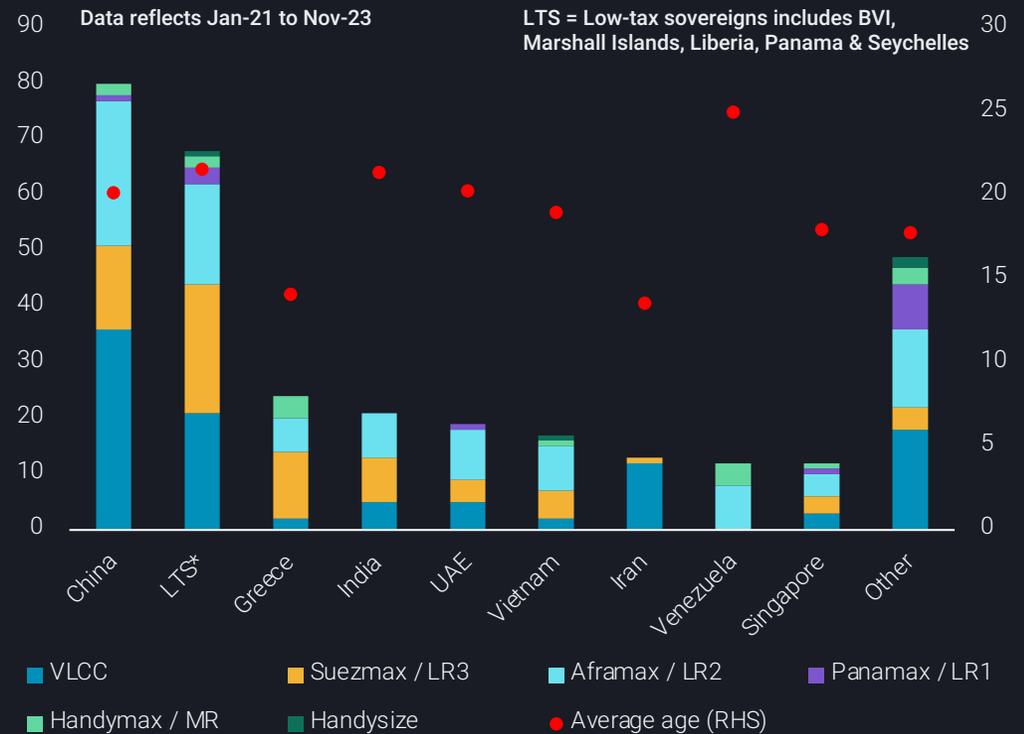


Chinese and low-tax sovereign operators dominate Iranian & Venezuelan trade, averaging 20 years old across both markets

Iran trade by operator nationality per vessel class (no. of vessels, LHS) vs Average vessel age (years, RHS)



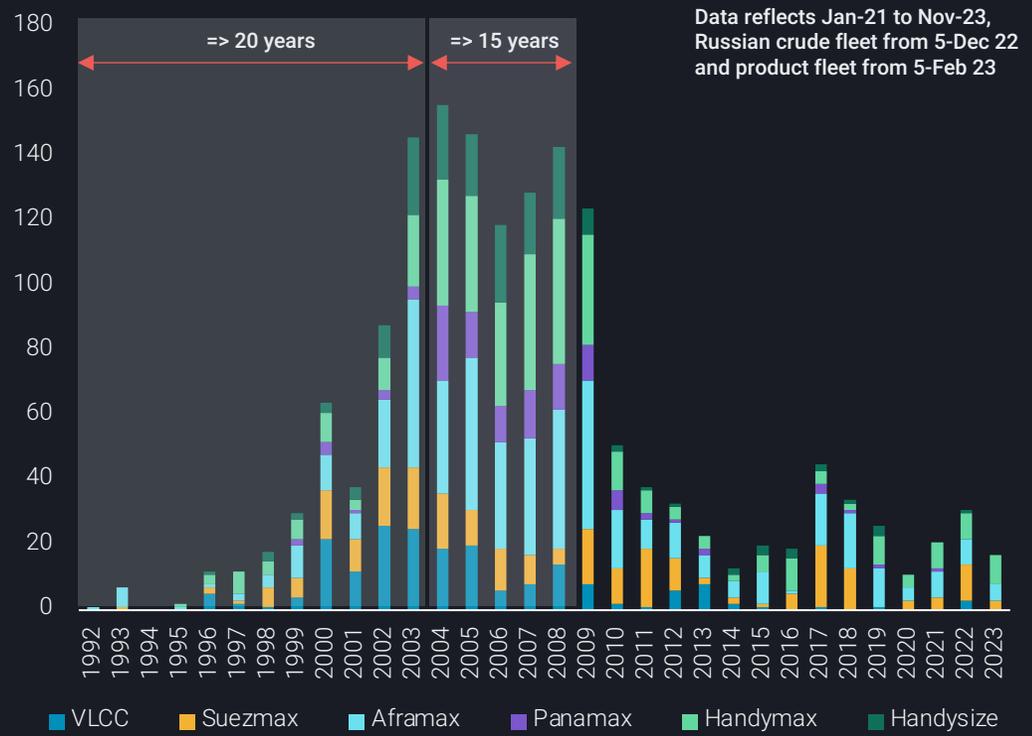
Venezuela trade by operator nationality per vessel class (no. of vessels, LHS) vs Average vessel age (years, RHS)



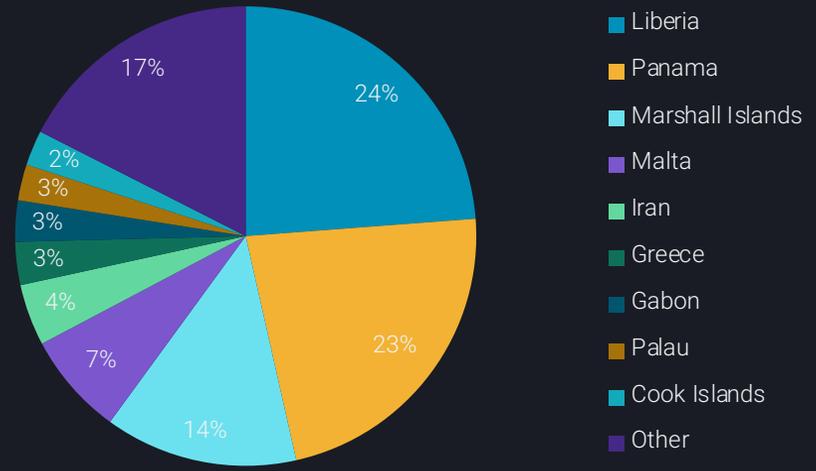
Operator nationality assessments are regularly updated but may not always reflect the very latest change due to low transparency

Fleet profile – Age & Flags

The opaque market fleet age profile (build year)*



Share of the opaque market fleet (count of tankers) by flag



Opaque market fleet age profile

Age (year)	Tankers	Share
0-5	140	9%
6-10	120	7%
11-15	389	24%
16-20	697	43%
> 20	272	17%

*Excludes scrapped tankers

Key Takeaways

Fleet Analysis

The opaque markets' crude exports reached 5.7mbd in May, a 4-year high, accounting for a growing share of global crude exports

Over 1600 tankers have been involved in opaque trade since Jan 2021

Opaque market tanker activity peaked in Q2 supporting 4-year high exports, but has since declined signalling a slowdown in exports and involved number of tankers

We observe 146 tankers switch from Iran & Venezuela to Russian trade

US sanctions lifted on Venezuela could bring employment for up to 20 Aframax tankers per month if Chinese buyers steer clear

Russian crude STS activity declines to 12-month low, but ice-class utilisation suggests Urals STS operations may resurge in Q1 2024

Diverging trends in recent months' mileage indicate tankers are ballasting to other destinations, likely wary of sanctions

Fleet Profile

European operators appear to be currently reducing their involvement in Russian crude & CPP trade, likely on fear of tougher price cap enforcement, especially by US authorities

European operators reduce Russian Urals trading after prices surpassed stipulated cap levels, while Russia & low-tax sovereign operators share rises

Russian Urals & diesel price cap breach results in growing numbers of tankers leaving the trade; mostly to PG & East Med

Danish straits: age of transiting crude tankers is of concern and may enable further EU sanctions, while CPP tanker age is unchanged

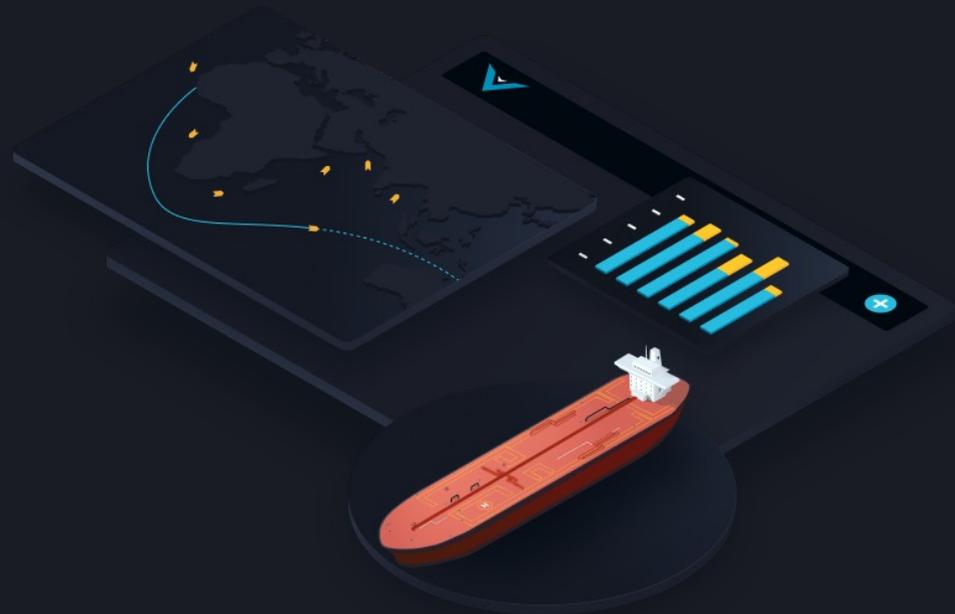
Chinese and low-tax sovereign operators dominate Iranian & Venezuelan trade, tankers averaging 20 years old across both markets

Tankers in the total opaque fleet average 16 years old and the most common flags are Liberia, Panama and Marshall Islands

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