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Russian oil tracker

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Summary

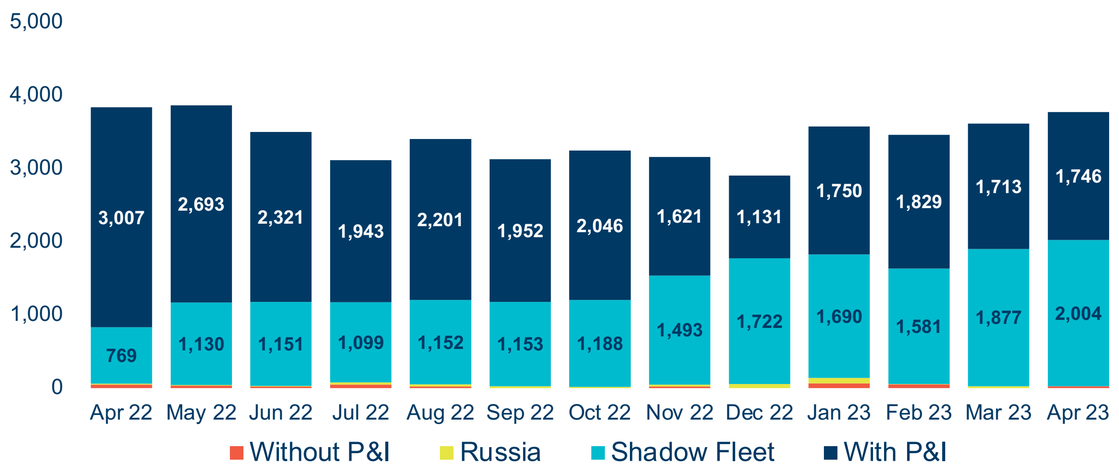
- Russian seaborne oil export volumes appeared to be resilient to sanctions since the invasion as in April 2023 exports of crude oil and oil products by sea exceeded the pre-invasion level. Despite all its efforts to boost its shadow fleet, Russian still heavily relies on Western maritime services as around half of crude oil and two-thirds of oil products were shipped by tankers with P&I Club insurance in April 2023. The P&I Club insurance coverage varies by ports of shipment. 62% of crude oil exports from Black Sea ports were shipped by tankers with P&I Club insurance while only 27% of crude oil shipments from Pacific Ocean ports had P&I Club insurance in April 2023.
- The KSE Institute estimates Russian shadow fleet at 143 tankers in April 2023. The 105 of these tankers were built more than 15 years ago. Operation of Russian shadow fleet poses huge environmental risks for the EU as decrepit tankers older than 15 years without P&I insurance navigate several European countries coastlines including Danish Straits. These shippers do not have capital to cover the clean-up costs in case of oil leaks near the EU coastline. In April 2023, the shadow fleet was responsible for exports of around 2 mb/d of crude oil and 0.8 mb/d of oil products.
- India and Turkey became the biggest buyer of Russian seaborne crude and oil products respectively after the coalition of advanced democracies refused to purchase Russian oil.
- Steep price discounts for both Russian crude and oil products continue supporting the strong demand for Russian oil exports. In May 2023, Urals decreased to around $50/bbl and remained eligible for shipping with P&I insurance. In December 2022-May 2023 ESPO and in December 2022-April 2023 Arctic grades were shipped with Western maritime services at prices much above the price cap indicating weak policy enforcement. Both premium and discounted oil product prices remained below the price caps in May.
- Russian oil export revenues decreased by $1.4 bn to $13.3 bn in May due to both lower volumes and declined world crude prices. According to the KSE Institute estimates, in the base case with current oil price caps and status quo of sanctions but their stronger enforcement, revenues will contract to $132 bn and $105 bn in 2023 and 2024 respectively compared to $218 bn in 2022. If the price cap is lowered to US$ 50/bbl discount to forecast Brent prices, revenues fall to just $104 bn and $51 bn in 2023 and 2024. However, in case of weak sanctions enforcement, Russian oil revenues could approach a robust $164 bn and $169 bn in 2023 and 2024 respectively.

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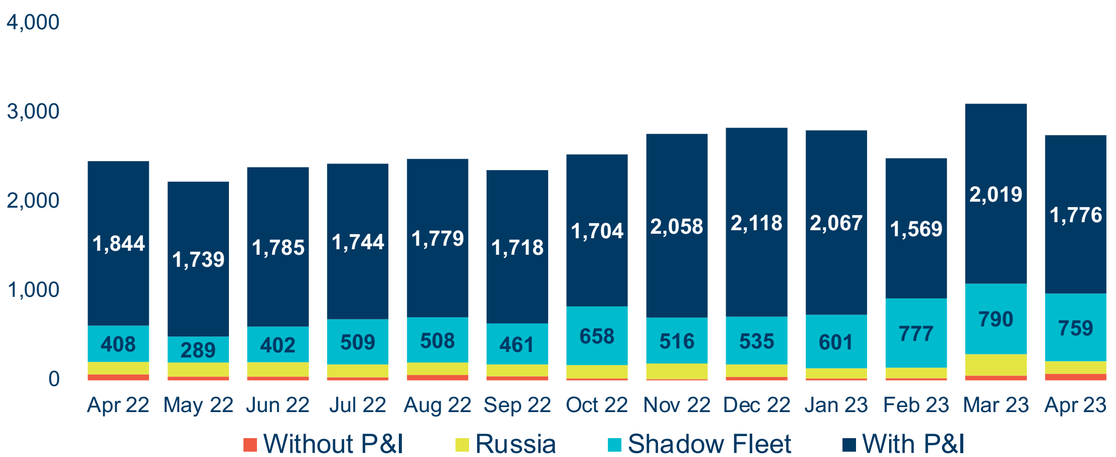
Russian seaborne oil exports volumes appeared to be resilent to sanctions although Russia continues relying on Western maritime services

- Russian seaborne oil exports volumes appeared to be resilient to sanctions since the invasion
- In April 2023 exports of crude oil and oil products by sea exceeded the pre-invasion level
- Prior to the introduction of G7 oil price cap Russia started increasing shadow fleet to circumvent price cap regulaiton
- In April 2023 the shipment of seaborne crude oil increased by 4.3% (MoM) but decreased by 1.7 (YoY). The exports of oil products decreased by 11.4% (MoM) but increased by 11.8% (YoY).
- Despite all its efforts of boosting shadow fleet, Russian still heavily relies on Western maritime services as around half of crude oil and two-thirds of oil products were shipped by tankers with P&I Club insurance

Russian seaborne crude oil exports, kb/d



Exports of Russian oil products, kb/d



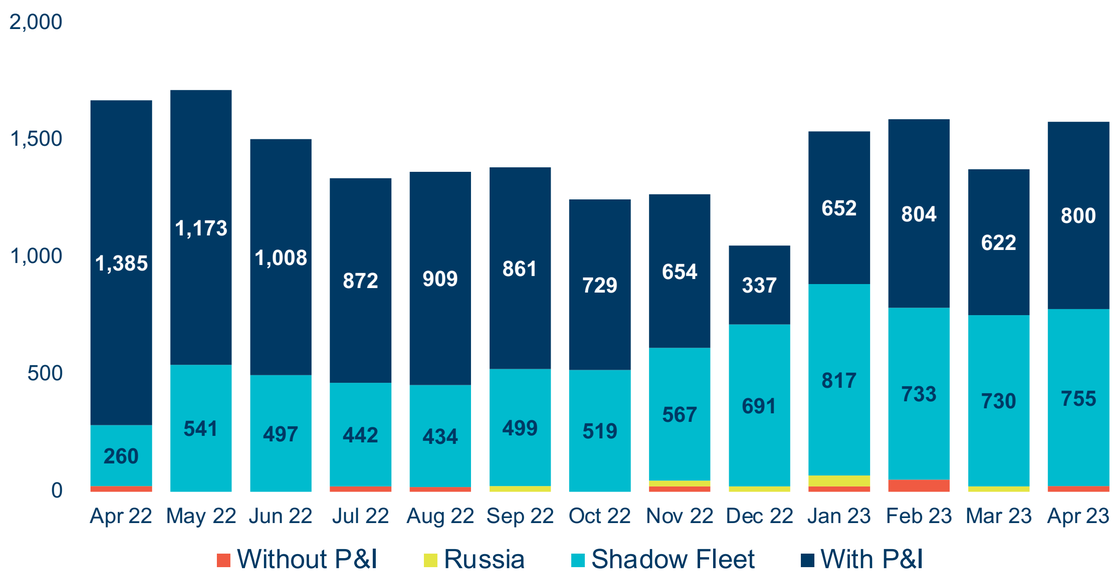
Source: Equasis, P&I Club webpage, KSE Institute estimates

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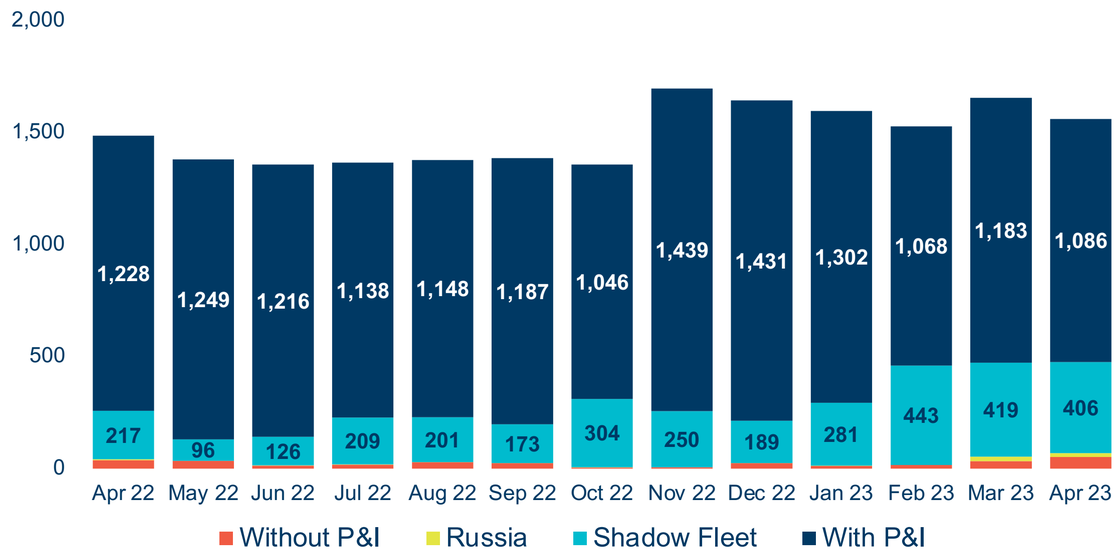
60% of crude oil & oil products were shipped by tankers with P&I Club insurance from Baltic Sea ports in April 2023

- In April 2023 the exports of crude oil from Baltic ports increased by 14.8% (MoM) but decreased by 5.4% (YoY).
- The exports of oil products from Baltic ports decreased 5.7% (MoM) but increased by 5.0% (YoY).
- 51% of crude oil and 71% of oil products were shipped by tankers with P&I Club insurance

Russian crude oil exports from Baltic Sea ports, kb/d



Exports of Russian oil products from Baltic Sea ports, kb/d



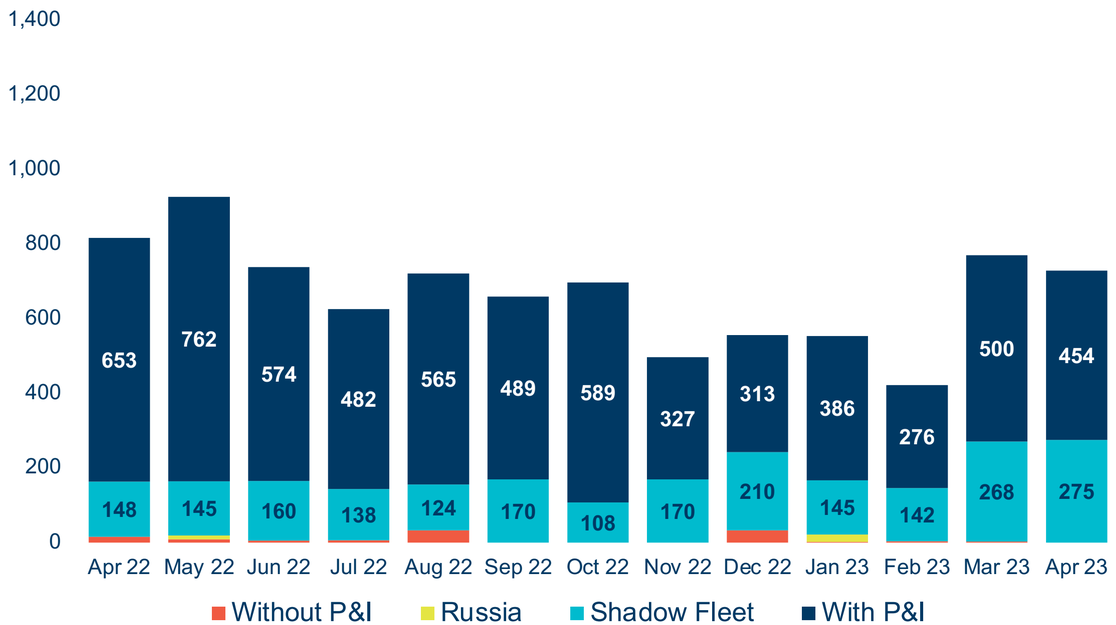
Source: Equasis, P&I Club webpage, KSE Institute estimates

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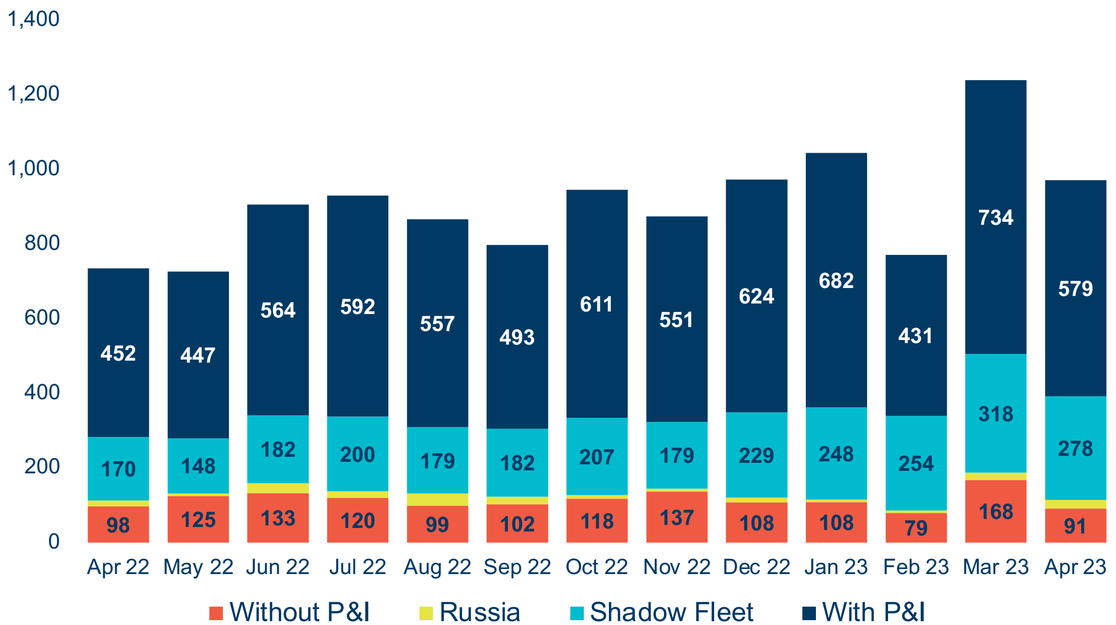
61% of crude oil & oil products were shipped by tankers with P&I Club insurance from Black Sea ports in April 2023

- In April 2023 the exports of crude oil from Black Sea ports decreased by 14.8% (MoM) and by 10.7% (YoY).
- The exports of oil products from Black Sea ports decreased by 21.6% (MoM) but increased by 32.2% (YoY).
- 62% of crude oil and 60% of oil products were shipped by tankers with P&I Club insurance

Russian crude oil exports from Black Sea ports, kb/d



Exports of Russian oil products from Black Sea ports, kb/d



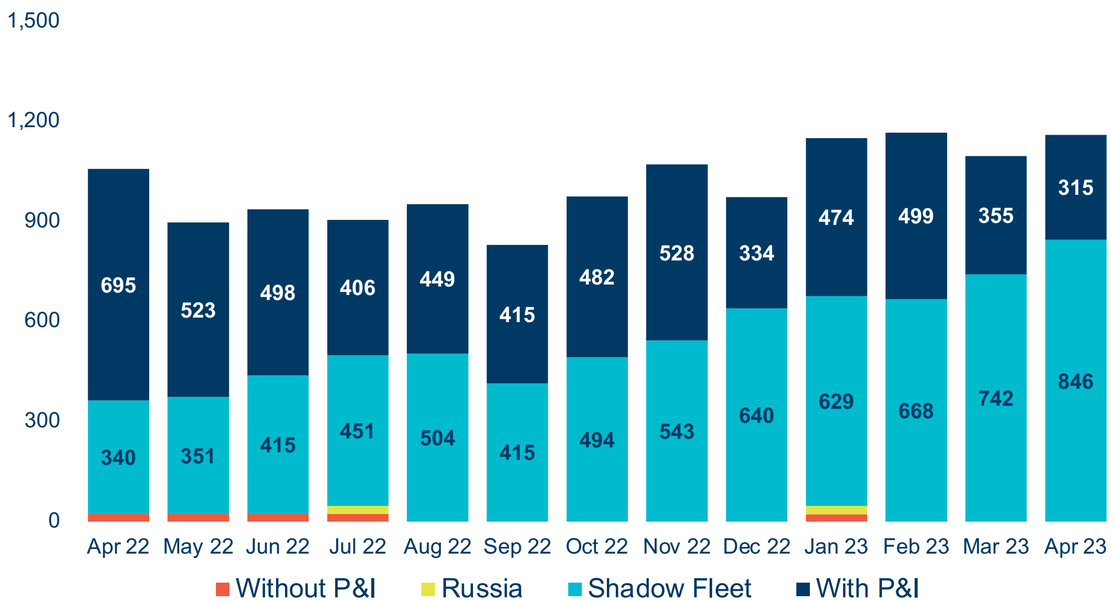
Source: Equasis, P&I Club webpage, KSE Institute estimates

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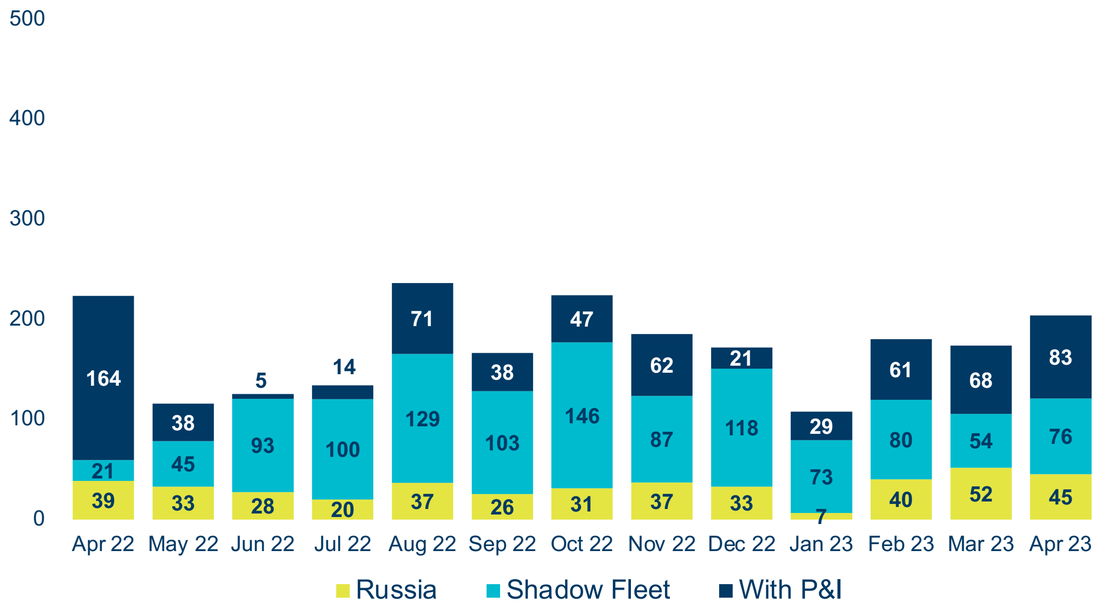
29% of crude oil & oil products were shipped by tankers with P&I Club insurance from Pacific Ocean ports in April 2023

- In April 2023 the exports of crude oil from Pacific Ocean ports increased by 5.8% (MoM) and by 9.6% (YoY)
- The exports of oil products from Pacific Ocean ports increased by 17.4% (MoM) but decreased by 8.8% (YoY)
- Only 27% of crude oil and 41% of oil products were shipped by tankers with P&I Club insurance in April 2023

Russian crude oil exports from Pacific Ocean ports, kb/d



Exports of Russian oil products from Pacific Ocean ports, kb/d



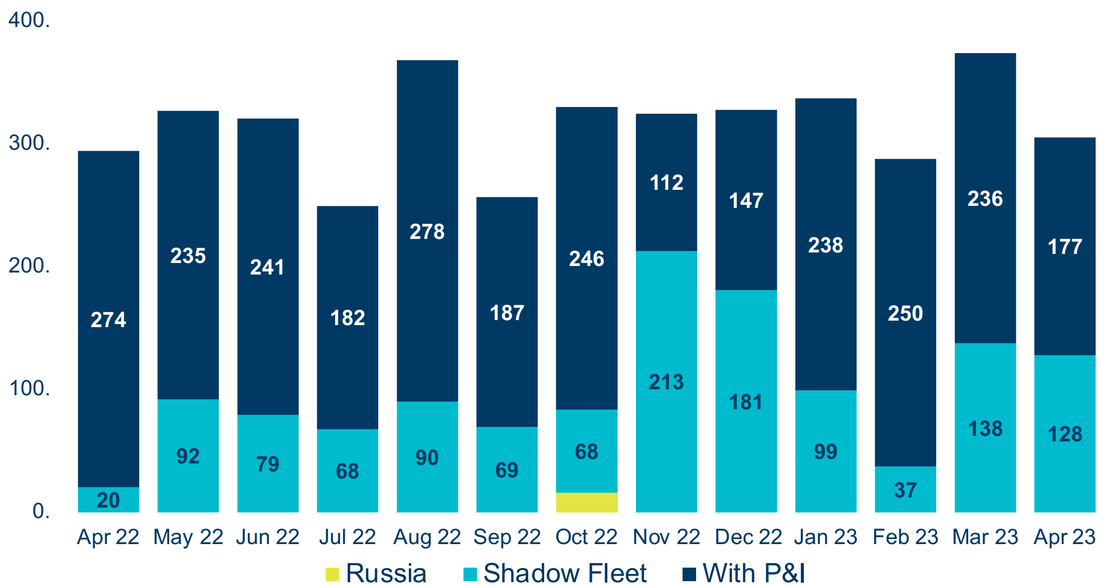
Source: Equasis, P&I Club webpage, KSE Institute estimates

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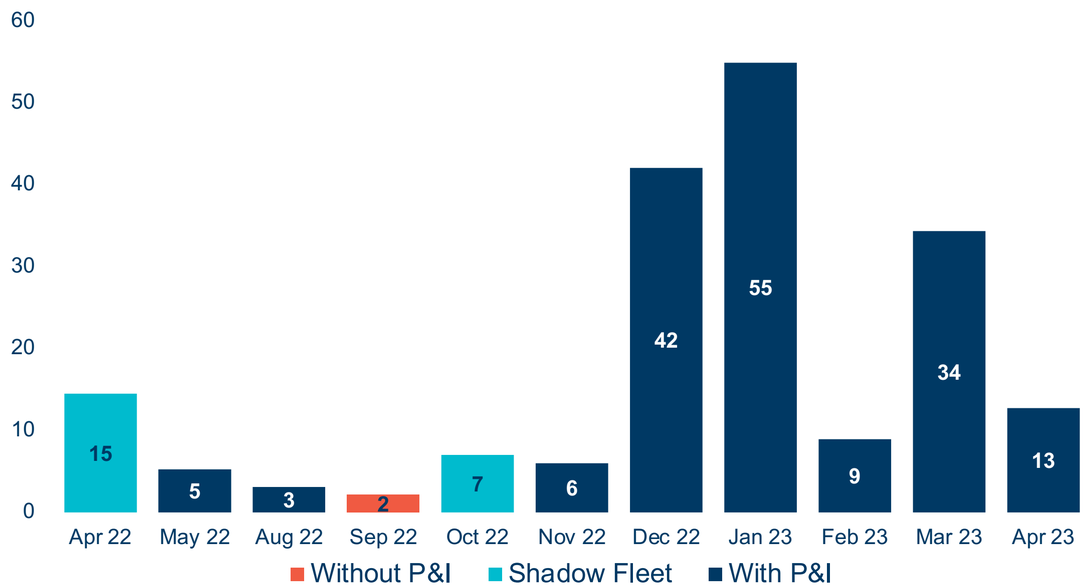
60% of crude oil and oil products were shipped by tankers with P&I Club insurance from Arctic Ocean ports in April 2023

- In April 2023 the exports of crude oil from Arctic Ocean ports decreased by 18.4% (MoM, but increased by 3.8% (YoY)
- The exports of oil products from Arctic Ocean is insignificant as Russia ships predominantly crude from these ports.
- 58% of crude oil was shipped by tankers with P&I Club insurance in April 2023

Russian crude oil exports from Arctic Ocean ports, kb/d



Exports of Russian oil products from Arctic Ocean ports, kb/d



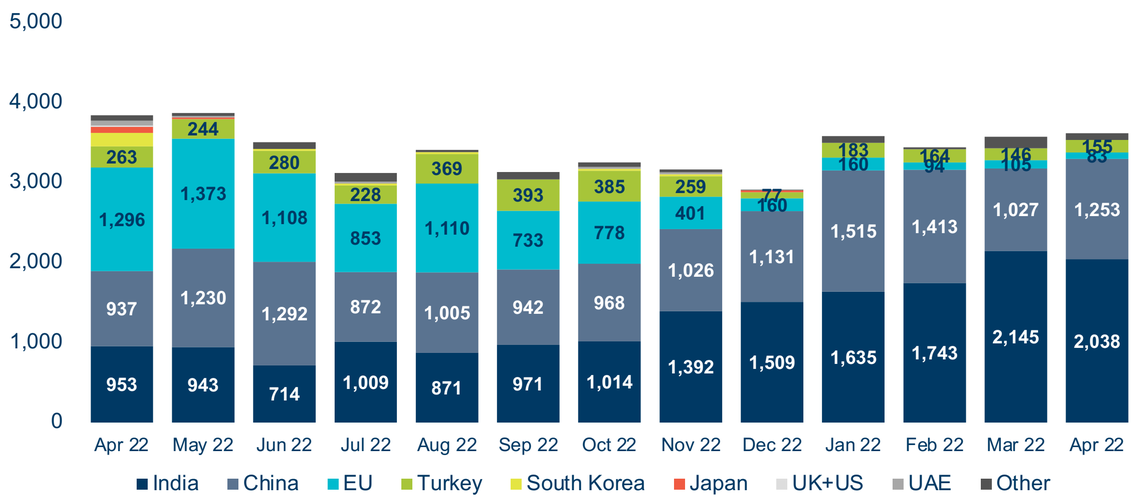
Source: Equasis, P&I Club webpage, KSE Institute estimates

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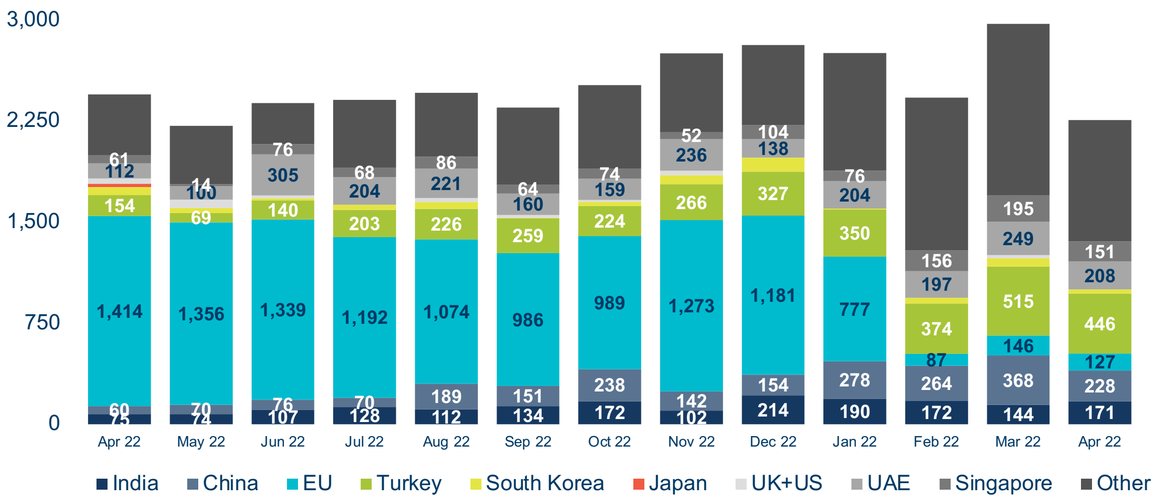
India became the biggest buyer of Russian seaborne crude while Turkey became the biggest importer of oil products after the coalition of advanced democracies refused to purchase Russian oil

- In April 2023 the share of the EU in Russian crude exports decreased to just 2% from 34% (YoY) as only Bulgaria is eligible for seaborne oil imports from Russia after EU's embargo came into effect in December 2022
- In April 2023 the share of the EU in Russian oil products exports decreased from 58% to only 6% (YoY) after EU's embargo on oil products came into effect in February 2023
- India became the biggest buyer of Russian seaborne crude after Ukrainian allies refused from its purchases. Its imports increased from less than 0.1 mb/d before Russia's invasion to more than 2.0 mb/d in March-April 2023
- The US and the UK phased out purchases of Russian crude and oil products after the invasion.
- Although Turkey decreases crude oil imports from Russia since December 2022, it almost trippled oil products imports from Russia becoming the biggest importer of Russian origin oil products
- Russia also managed to increase oil products exports to UAE, China, India and Singapore to replace the loss of its traditional European market

Russian seaborne crude oil exports by destinations countries, kb/d



Russian oil products exports by destinations countries, kb/d



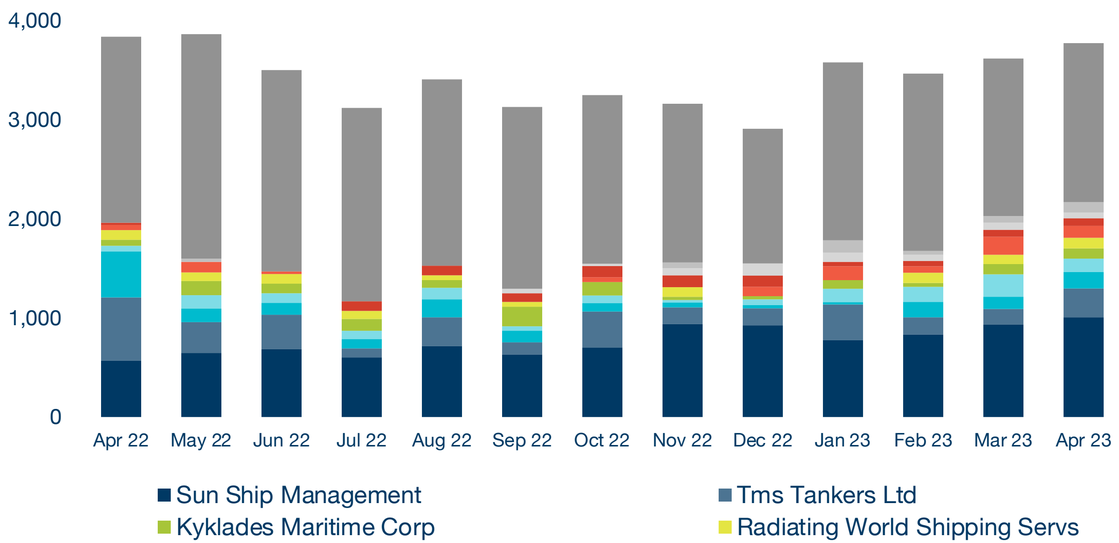
Source: KSE Institute estimates

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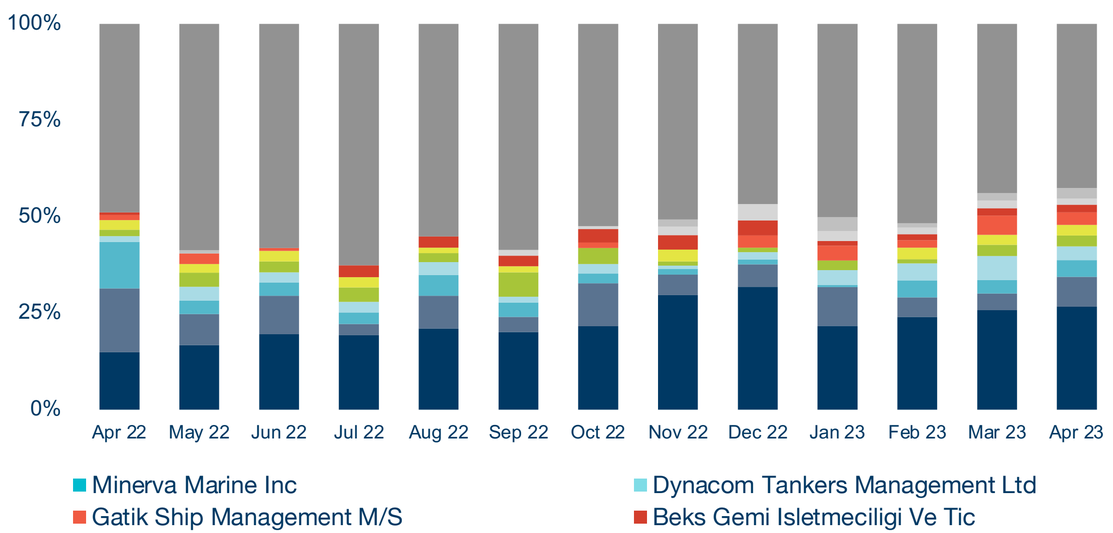
Sun Ship Management retains the leader position in Russian crude shipments while the four consecutive providers of freight services to Russia are Greek-owned companies

- Affiliated with sanctioned Sovkomflot Sun Ship Management retains the leader position in Russian crude shipments as it share increased by 12% to 27% (YoY) in April
- The four consecutive providers of freight services to Russia are Greek-owned companies
- The emerged from nowhere companies with non-transparent owners' structure Gatik Ship Management and Fractal Marine registered in OEA and India respectively held seventh and 9th rank in Russian oil shipments

Russian crude oil exports by shipowners, kb/d



Russian crude oil exports by shipowners, %



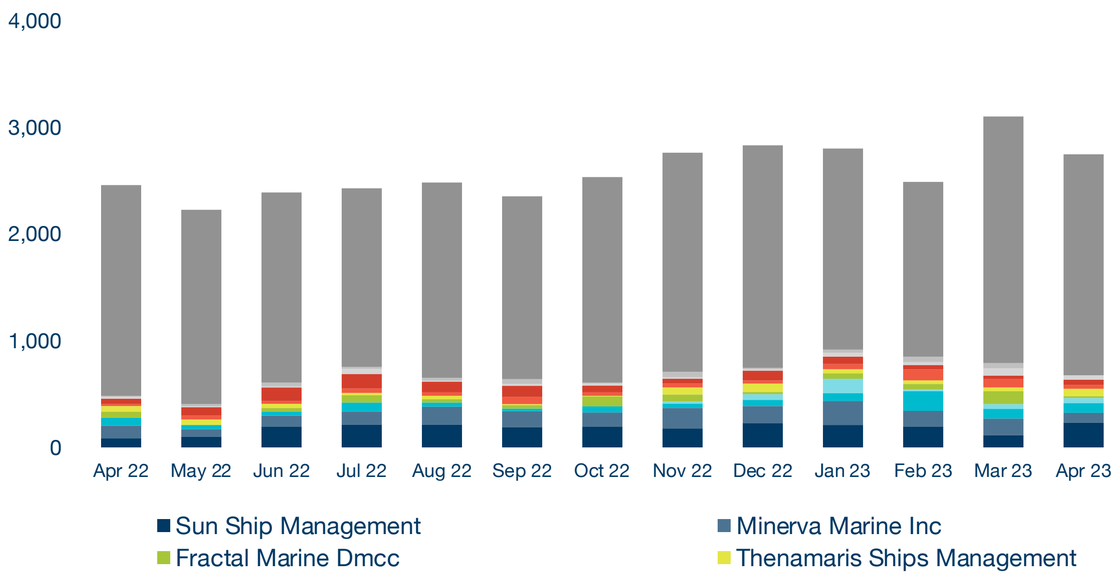
Source: KSE Institute estimates

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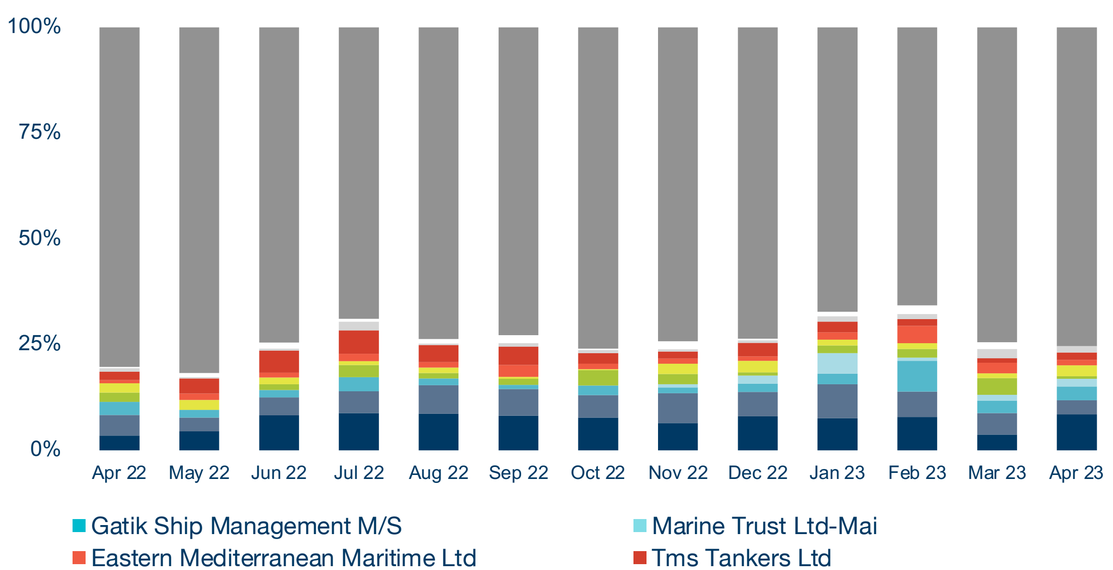
Sun Ship Management is the leader in Russian oil products shipments while Gatik Ship Management and Fractal Marine were ranked 3rd and 5th in this category

- Sun Ship Management was the leader in Russian oil products shipments as it share increased by 5% to 9% (MoM) in April
- Another two companies from Russian shadow fleet Gatik Ship Management and Fractal Marine ranked third and fifth in oil products shipping in April
- Another two from top five providers for shipping Russian oil products were Greek-owned companies

Russian oil products exports by shipowners, kb/d



Russian oil products exports by shipowners, %



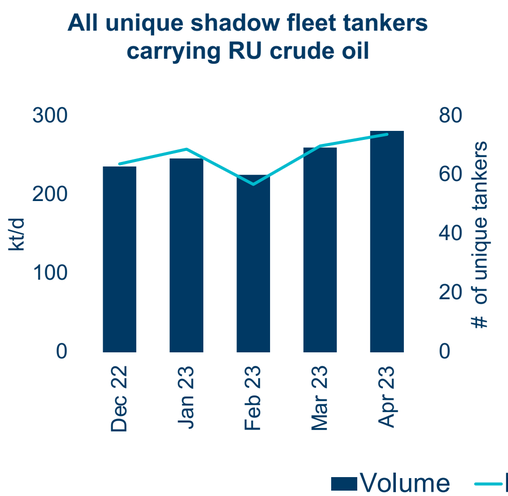
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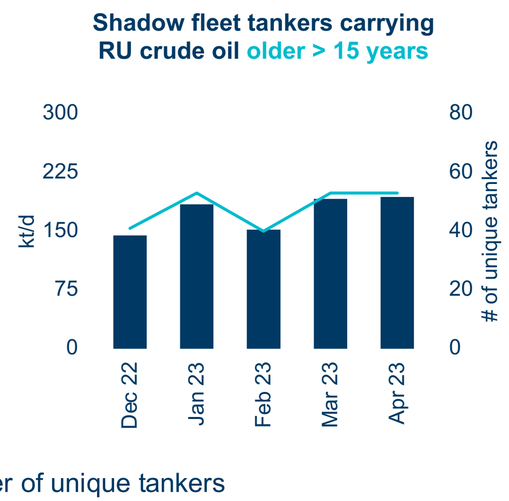
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The number of Russian shadow fleet tankers* carrying crude and oil products from Russian ports is estimated at 140 vessels in April 2023

- Russian oil exporters increased the number of shadow fleet tankers carrying crude from Russian ports to 74 in April 2023 while 72% of them were older than 15 years
- The number of shadow fleet tankers carrying Russian oil products from Russian ports increased to 66 in April 2023 while 62 or 94% of them were older than 15 years
- Having moved into the shadow, the tankers are not likely to be properly maintained and operated increasing the probability of environment catastrophe for which Russia will refuse to pay

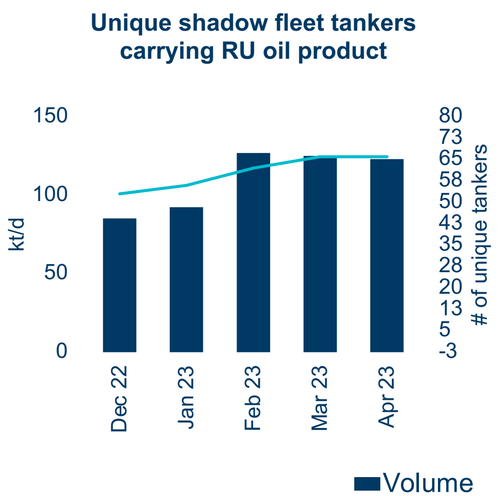
Crude oil

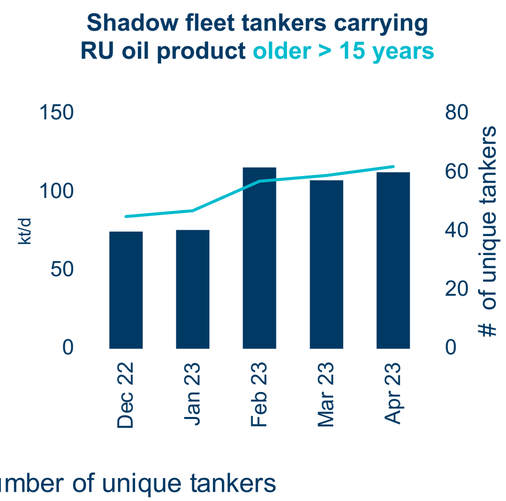






Oil products





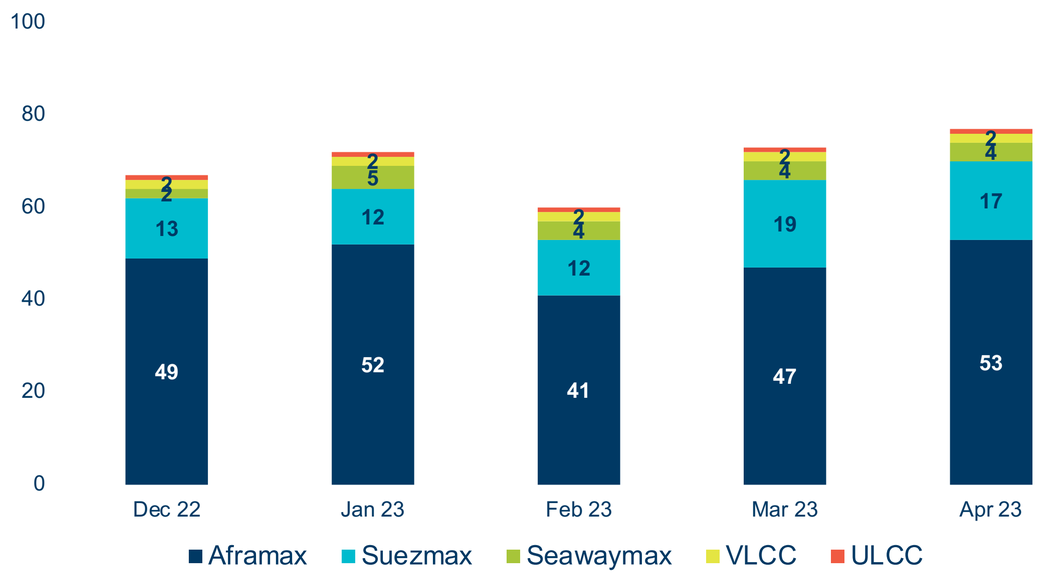
Source: Equasis, P&I Club webpage, KSE Institute estimates

**Note: Russian shadow fleet is defined as tankers from non-EU, non-G7 countries and without using P&I Club services plus Sun Ship Management, Gatik Shp Management and Fractal Marine. The latter two were included in the shadow fleet after media established a clear link to Rosneft which used them to manipulate export price to violate price cap policy*

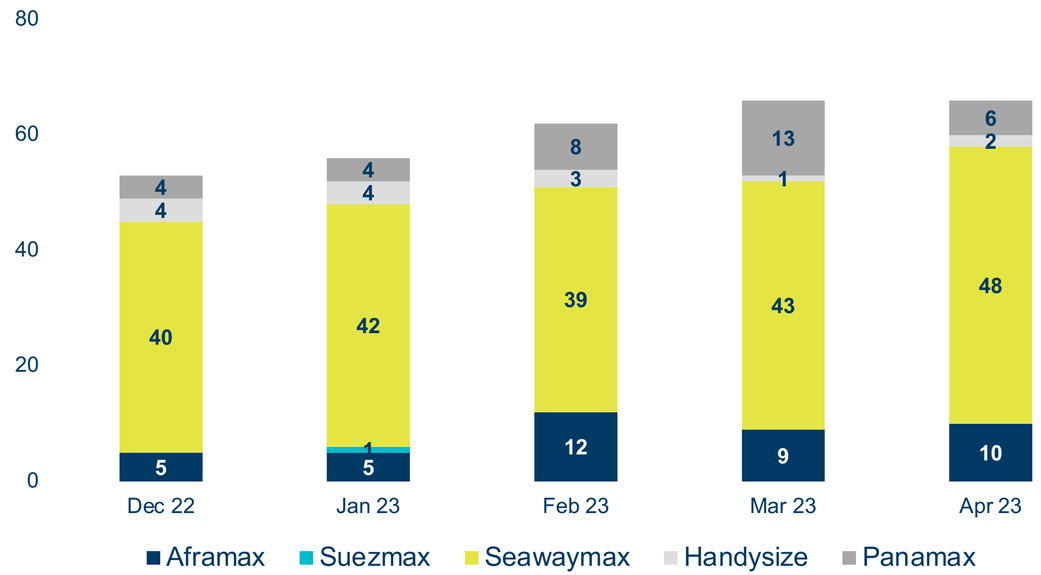
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Aframax and Seuzmax are the core of Russian shadow fleet carrying crude while Seawaymax and Aframax forms the Russian shadow fleet carrying oil products. Total Russian shadow fleet carrying oil and oil products from Russian ports and involved in STS transfers is estimated 143 tankers in April 2023

Structure of Russian shadow fleet carrying crude oil, number of unique tankers



Structure of Russian shadow fleet tankers carrying oil products, number of unique tankers



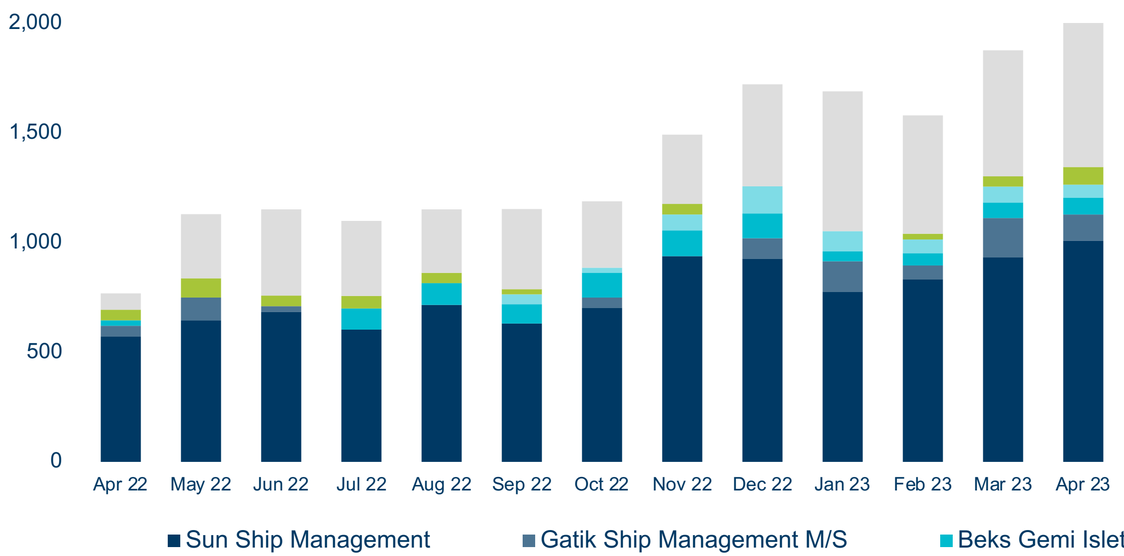
Source: Equasis, P&I Club webpage, KSE Institute estimates

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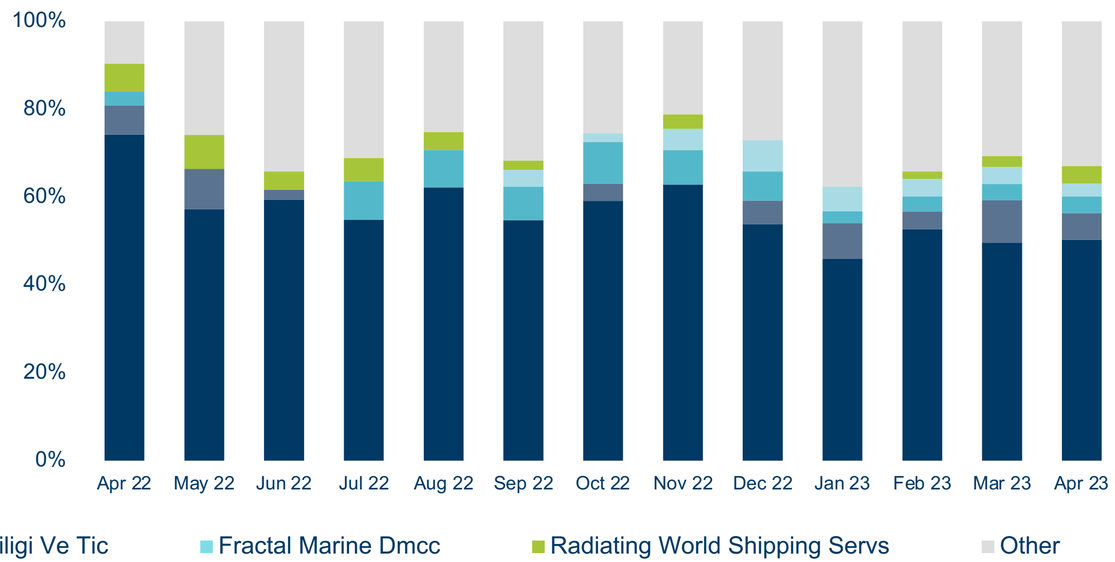
Russia boosted crude oil exports by shadow fleet by almost threefold over year

- Russia boosted crude oil exports by shadow fleet by almost threefold from around 0.7 mb/d to 2 mb/d in April (YoY)
- Sun Ship Management share in crude oil shipments by shadow fleet declined from 74% to 50% (YoY)
- The top five shipping companies were responsible for around two-thirds of crude oil exports by shadow fleet

Russian crude oil exports by shadow fleet, kb/d



Structure of Russian crude oil exports by shadow fleet, %



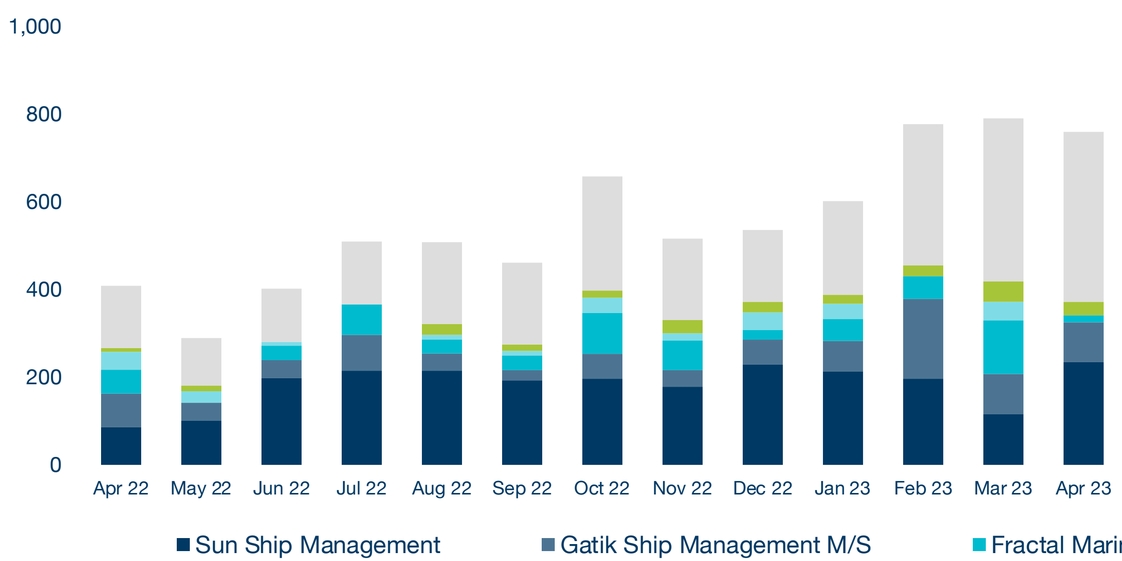
Source: KSE Institute estimates

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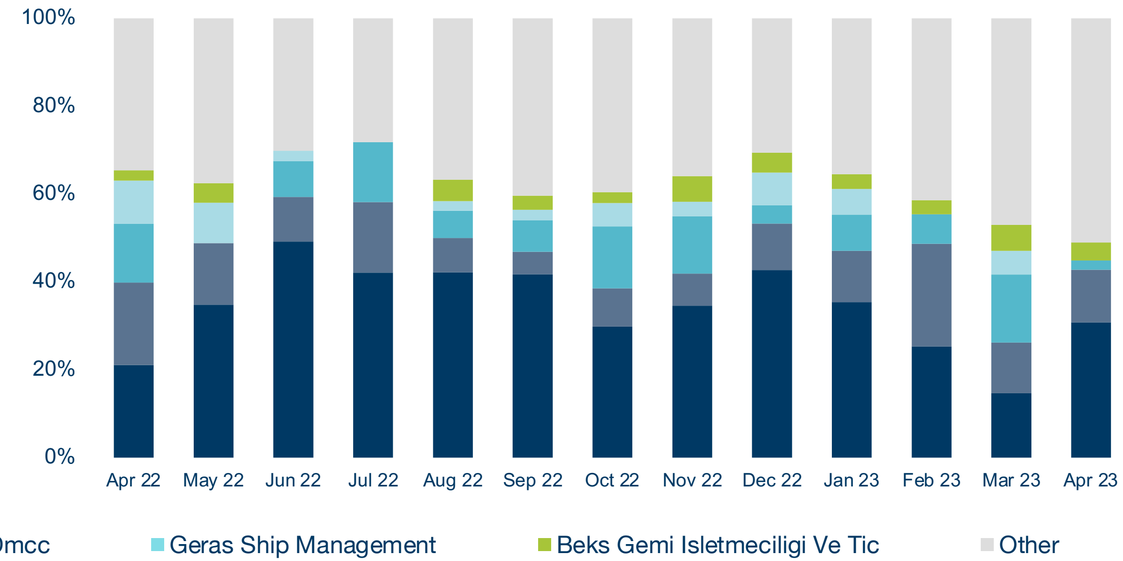
Russia boosted oil products exports by shadow fleet by 86% over year

- Russian boosted oil products exports by shadow fleet by 86% to around 0.8 mb/d in April (YoY)
- In April 2023, Sun Ship Management increased oil products shipments by 174% to 387 kb/d
- The top five shipping companies were responsible for around a half of oil products exports by shadow fleet

Russian oil products exports by shadow fleet, kb/d



Structure of Russian oil products exports by shadow fleet, %



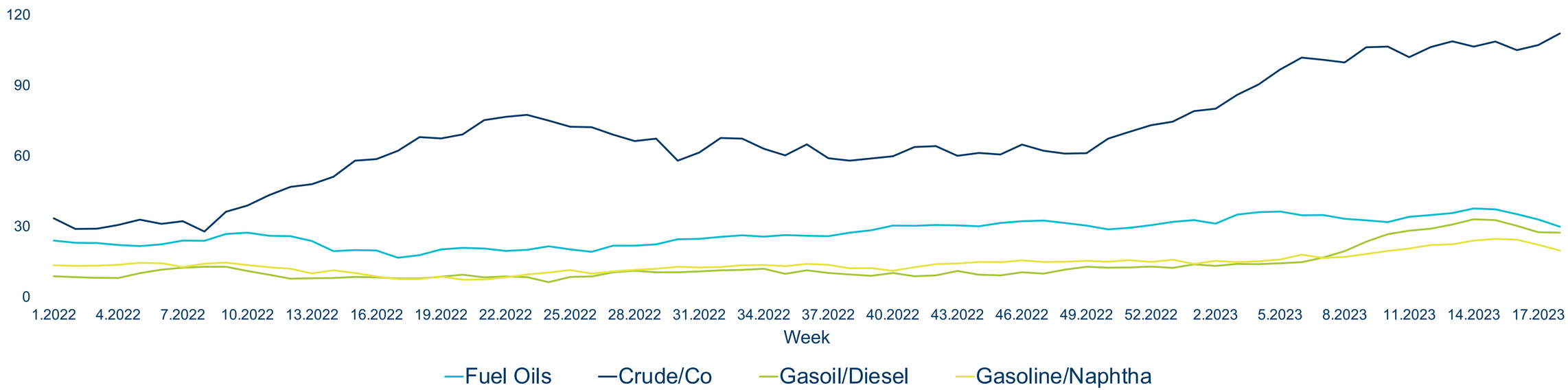
Source: KSE Institute estimates

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Rerouting of Russian crude and oil products to new destinations increased Russian oil on water by around 120 mb compared to the pre-invasion average

- Rerouting of Russian crude and oil products to new destinations have significantly increased Russian oil on water
- At the end of April, the amount of Russian oil on water was around 120 mb higher the pre-invasion average
- The amount of Russian crude and diesel on water more than tripled compared to January 2022
- The amount of fuel oils on water increased by around a quarter while the amount of gasoline and naphtha by around a half compared to pre-invasion level

Russian oil on water, mb, average per week



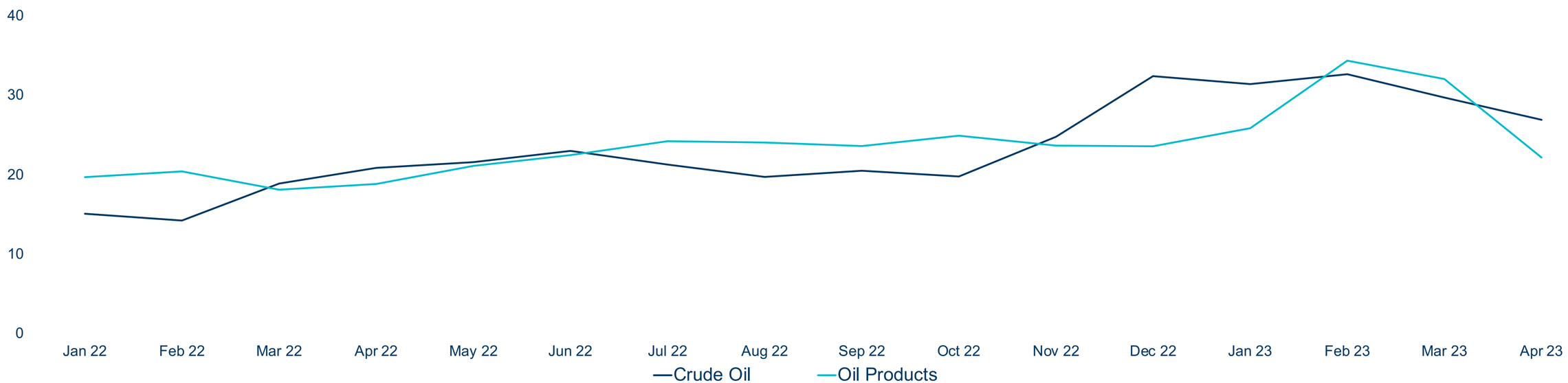
Source: KSE Institute estimates

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Average transit days of crude and oil products increased by 93% and 10% respectively compared to the pre-invasion average

- Rerouting crude oil from Europe to mostly India and China increased the average transit days for crude oil from 14 in February 2022 to 33 in February 2023. In April 2023 the figure declined 27 due to higher and lower crude imports by India and China respectively
- The average transit days for oil products increased from 20 in January 2022 to 34 in February 2023 but declined to 22 in April due to increased exports to Turkey and decrease to destinations located at long distance from Russia

Monthly average transit days of crude oil and oil products from Russia



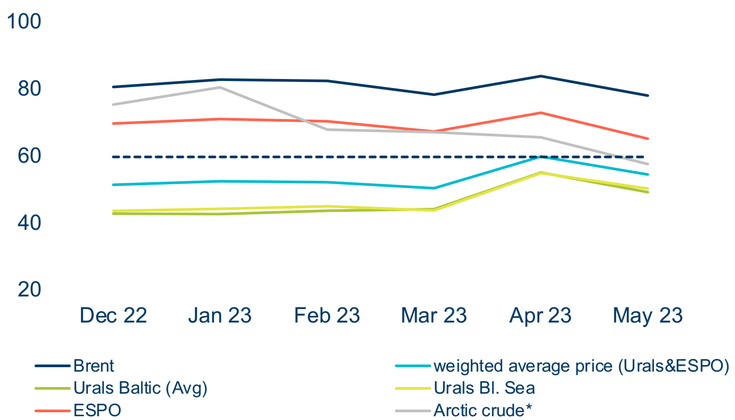
Source: KSE Institute estimates

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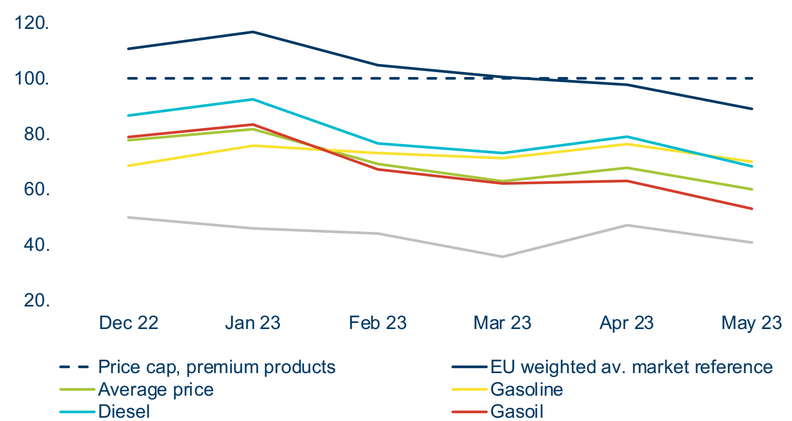
In May 2023, Urals decreased to around $50/bbl and remained eligible for shipping with P&I insurance. In December 2022-May 2023 ESPO and in December 2022-April 2023 Arctic grades were shipped with Western maritime services at prices much above the price cap. In December 2022-May 2023, both premium and discounted oil product prices remained below the price caps

- In May 2023, Urals FOB Baltic and Black Sea went down by $5/bbl to around $50/bbl, remaining eligible for EU maritime services
- ESPO decreased by $7.7/bbl to $65.4/bbl while average price of Arctic grades declined by $8.0/bbl to $57.9/bbl. Although shipments of these Russian crude grades were ineligible for Western maritime service in April, more than a quarter of shipments from Pacific ports and more than a half from Arctic ports were made with P&I insurance.
- Prices for Russian diesel and gasoline decreased by around $10.8/bbl and 6.4/bbl respectively to around $30-32/bbl below price cap. The price of VGO was almost 2.5 times lower than approved price cap of $100/bbl
- Price for fuel oil and naptha decreased to around $33.6/bbl and $36.0/bbl which is around $9-11/bbl lower than approved price cap for discounted products
- Steep price discounts for both Russian crude and oil products continue supporting the strong demand for Russian oil exports

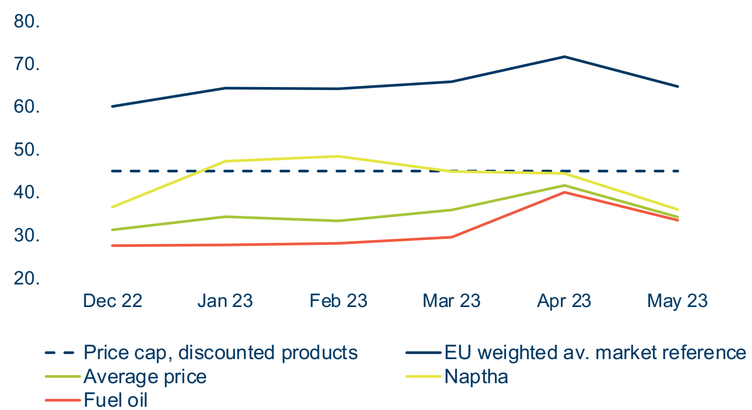
Russian Crude FOB Export Prices



Russian Premium Products FOB Export Prices



Russian Discounted Products FOB Export Prices



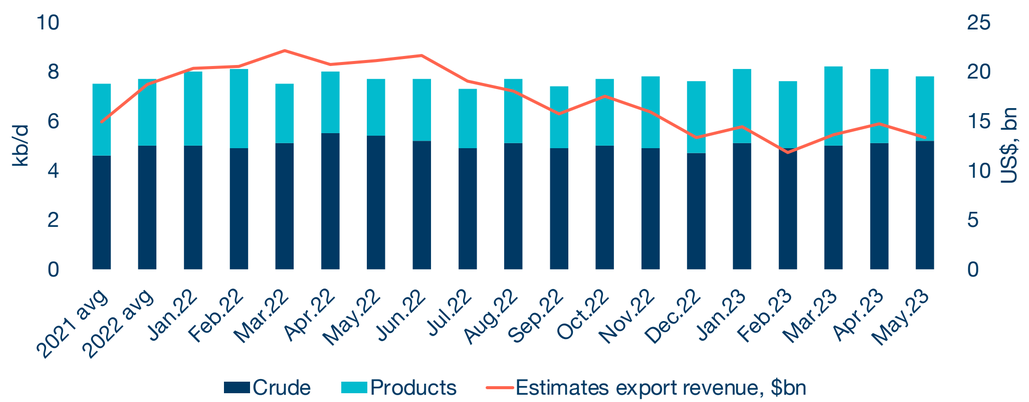
Source: IEA, *KSE Institute estimates

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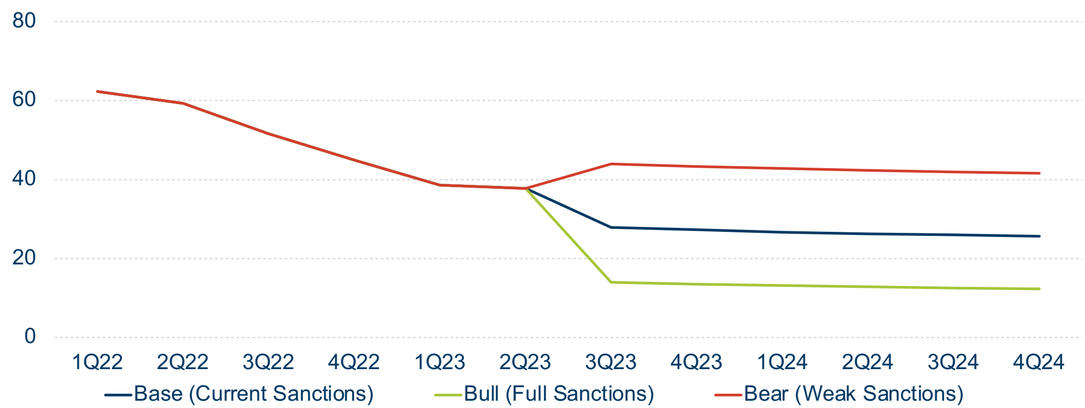
Russian oil export revenues were 37% lower than a year ago in May 2023. KSE Institute projects that revenues will contract to $132 bn and $105 bn in 2023 and 2024 respectively in the base case compared to $218 bn in 2022 but the scenario outcome is sensitive to sanctions enforcement

- Although volumes of Russian oil exports remained stable since the invasion as it was able to redirect exports to other markets, the decline in the world oil prices and steep discount on Russian oil resulted in a sharp fall in Russian oil revenues in 2023
- Russian oil export revenues decreased by $1.4 bn to $13.3 bn in May due to both lower volumes and declined world crude prices. Total export revenues were 37% lower than a year ago compared with a 29% YoY decline in April.
- According to the KSE Institute estimation, in the base case with current oil price caps and status quo of sanctions but their stronger enforcement regarding ESPO, Arctic grades and oil products, revenues will contract to $132 bn and $105 bn in 2023 and 2024 respectively compared to $218 bn in 2022. Total Russian oil exports goes down to 6.9 mb/d in this scenario.
- In the bull sanctions case, with lower price cap equivalent to US$ 50/bbl discount to forecast Brent prices, revenues fall to just $104 bn and $51 bn in 2023 and 2024 respectively. Total Russian oil exports goes down to 5.2 mb/d in this scenario.
- In the bear case, with US$ 10/bbl discount to forecast Brent prices, and less decline in oil export volumes, revenues fall but remain a still robust $164 bn and $169 bn in 2023 and 2024 respectively. Total Russian oil exports goes down to only to 7.3 mb/d in this scenario.

Russian Oil Exports and Revenues, kb/d, US$ bn



Russian Oil Earnings by Scenarios, US$ bn



Source: IEA, KSE Institute estimates

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In May 2023 total number of recorded STS transfers of Russian oil without P&I Club insurance jumped to 48 or by 60%. The 84% of STS transfers in the Black Sea were made without P&I insurance

Recorded Ship-to-Ship Transfers (STS) in April-May 2023

STS Area	April				May			
	voyages		DWT		voyages		DWT	
	Total	Wihtout P&I	Total	Wihtout P&I	Total	Wihtout P&I	Total	Wihtout P&I
Aegean Sea	22	11	2,448,523	1,212,544	17	5	1,329,591	402,314
Red Sea	4	1	400,194	114,809	-	-	-	-
UK Coast & Atlantic	3	2	285,720	211,460	2	1	219,608	105,344
Barents Sea	-	-	-	-	2	2	39,600	39,600
Black Sea	12	11	292,121	139,975	32	27	974,901	516,317
CIS Pacific	5	3	477,795	214,317	6	6	120,382	120,382
East China Sea	-	-	-	-	7	6	769,580	619,586
Gulf of Guinea	1	-	115,018	-	1	-	45,996	-
Singapore Area	5	2	597,013	220,214	2	1	93,249	46,941
Total	**52**	**30**	**4,616,384**	**2,113,319**	**69**	**48**	**3,592,907**	**1,850,484**

- In May 2023 total number of recorded STS transfers of Russian oil increased by a third by 69 while the number of STS transfers of oil shipped from Russian ports without P&I Club insurance jumped to 48 or by 60%
- The number of STS transfers in Aegean Sea decreased by 23% while number of transfers w/o P&I Club insurance more than halfed
- The number of STS tranfers in the Black Sea increased by 167% to 32 in May (m-o-m) and the region bypassed Aegean Sea by this indicator. The 84% of tranfers in the region were made without P&I insurance

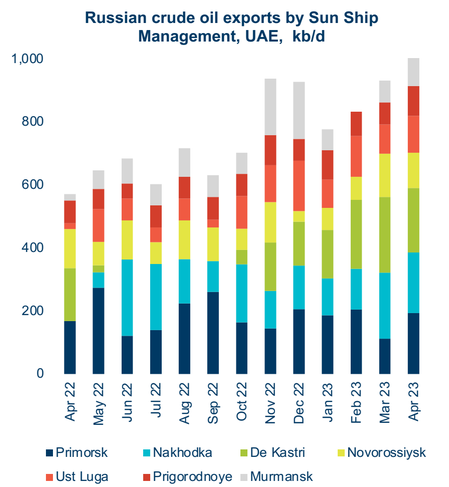
Source: Maritime Traffic, KSE Institute estimates

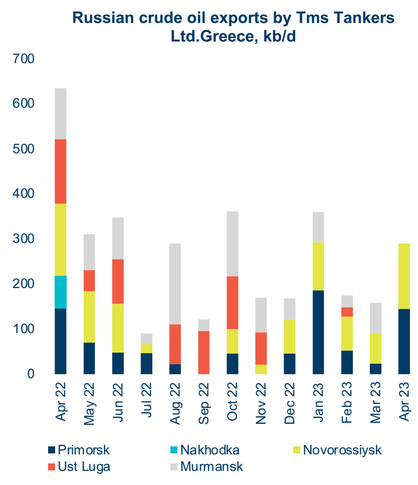
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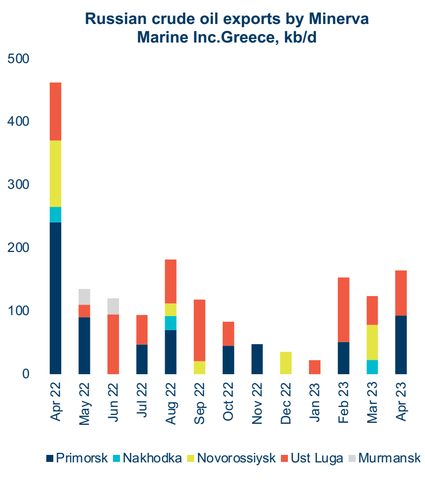
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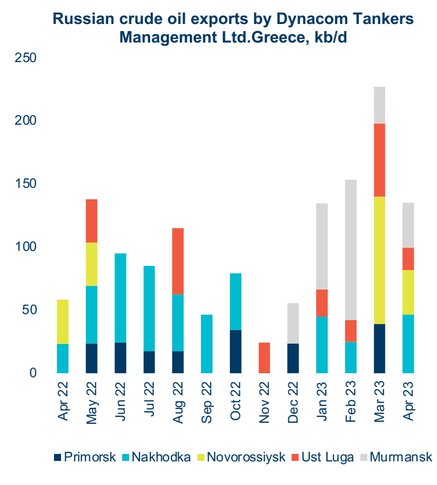
Top shipping services providers for Russian crude oil and oil products

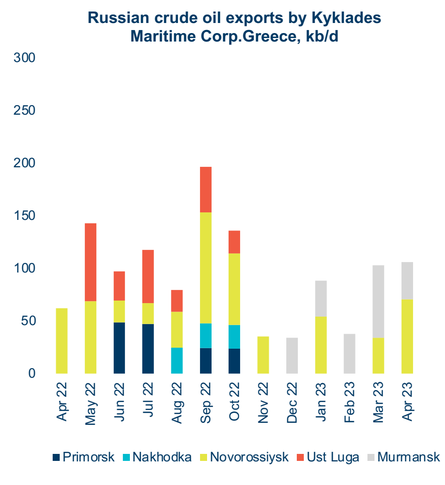
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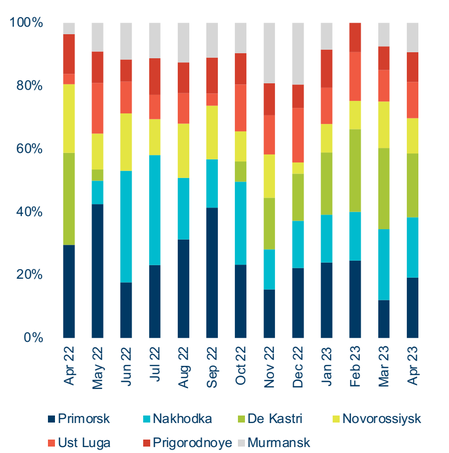


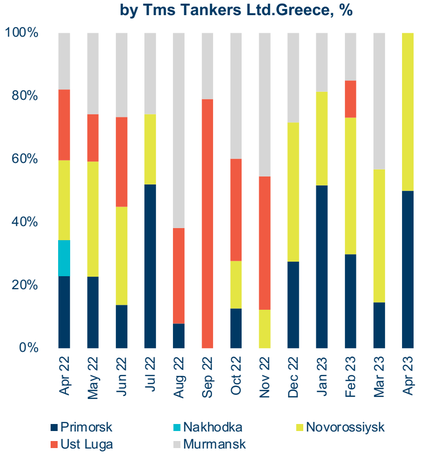


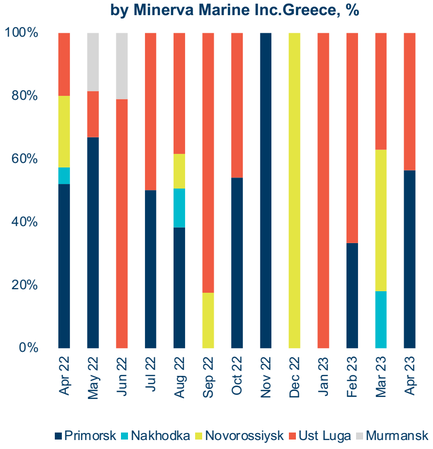


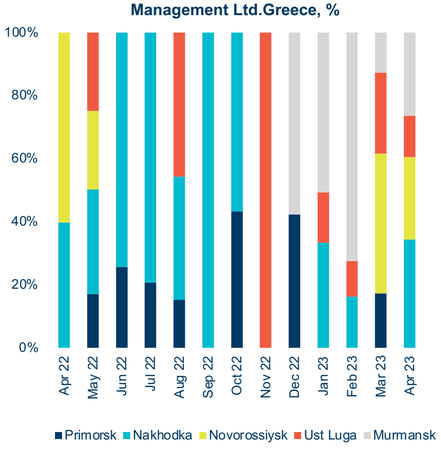


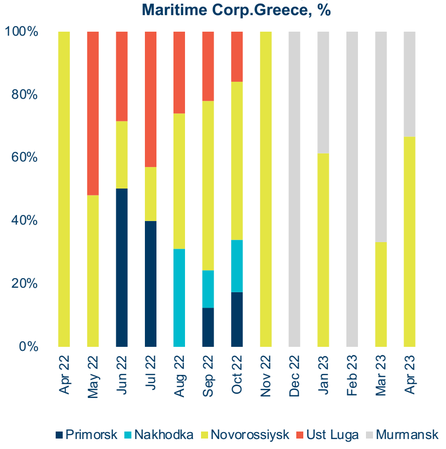






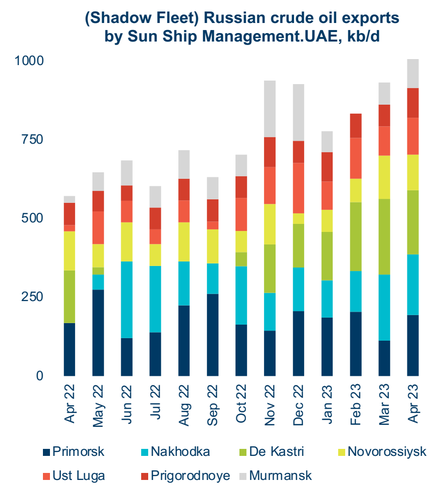


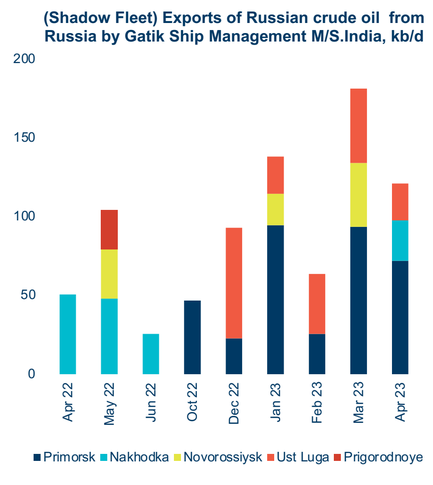


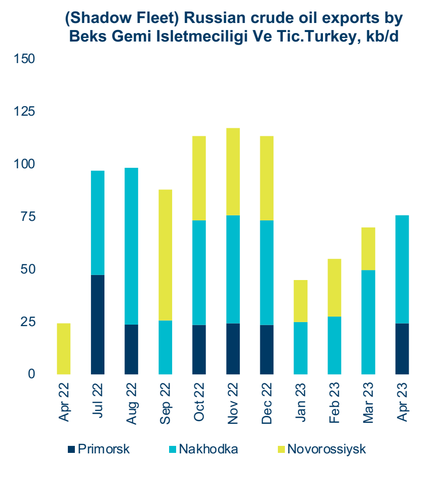


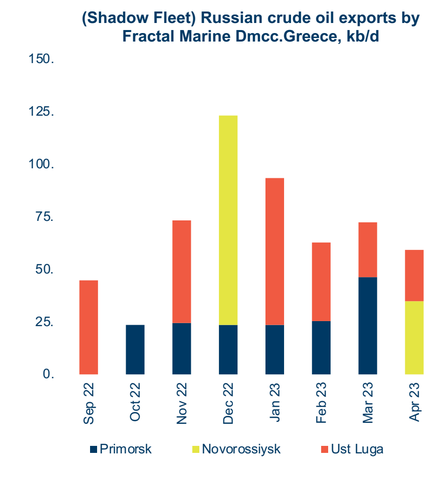
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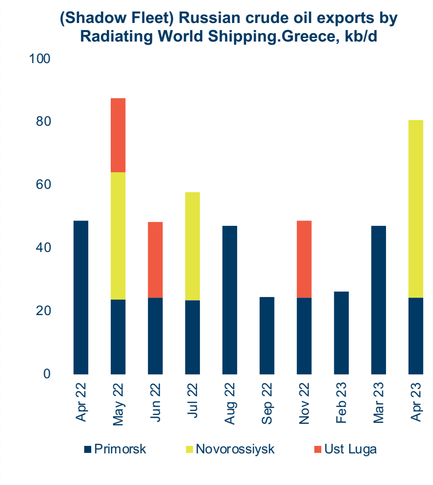
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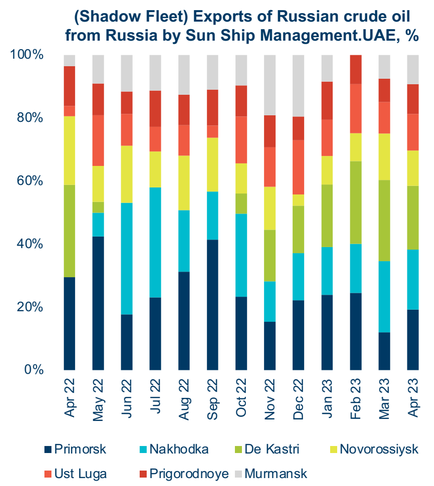


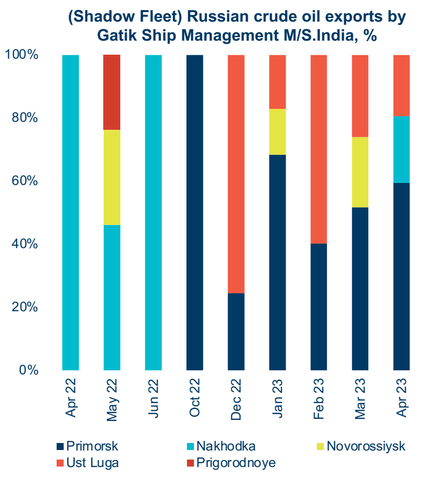


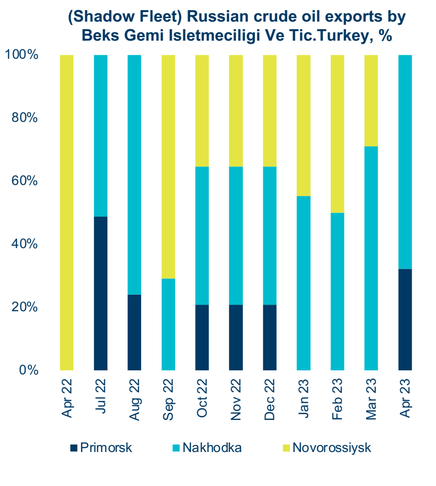


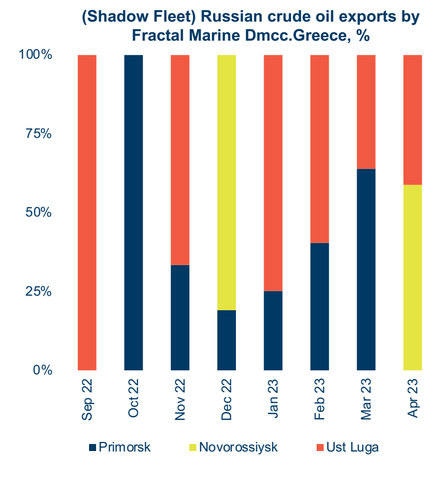


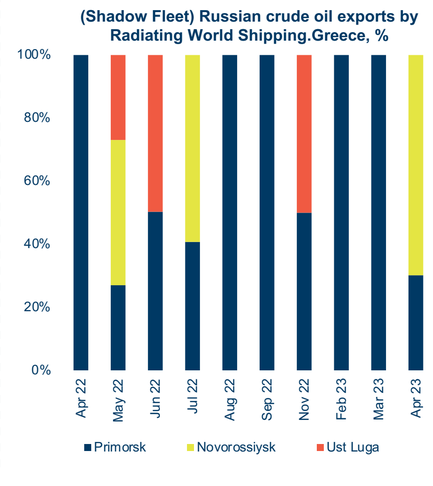






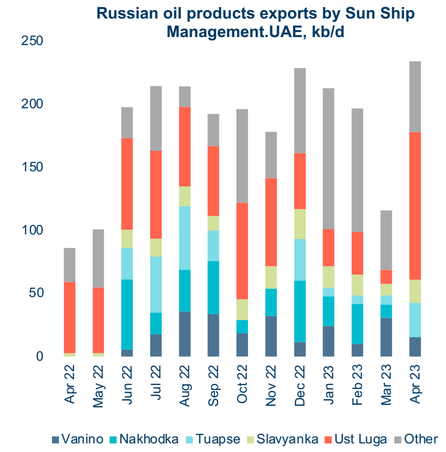


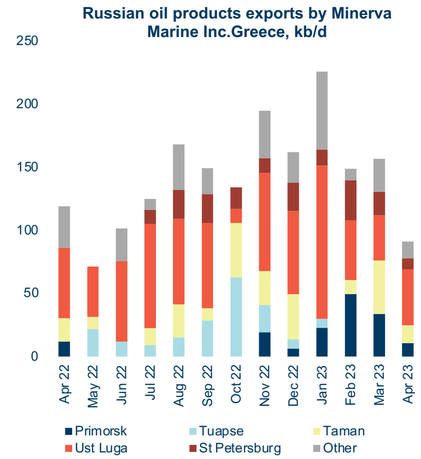


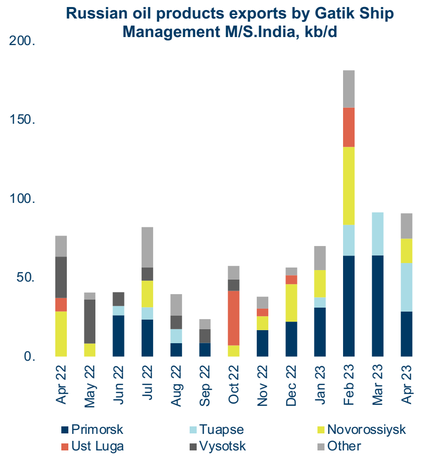


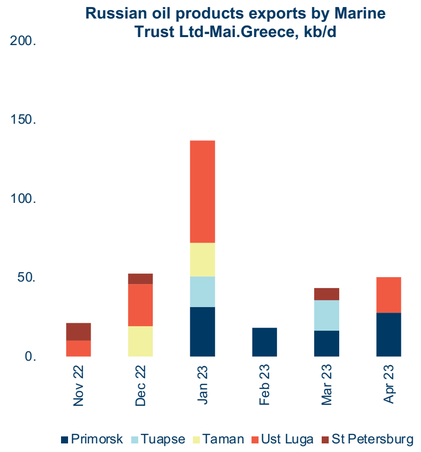
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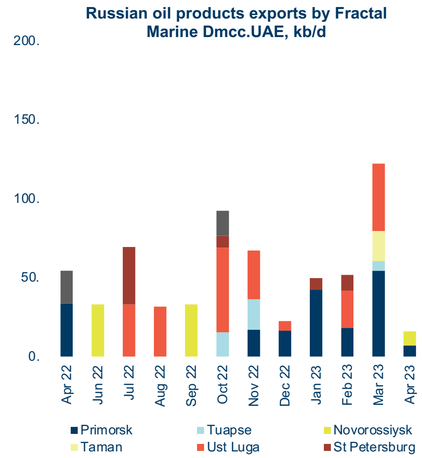
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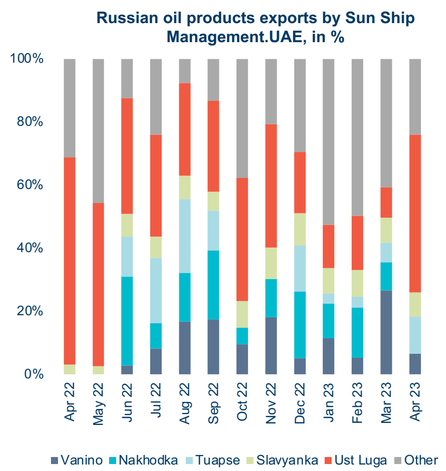


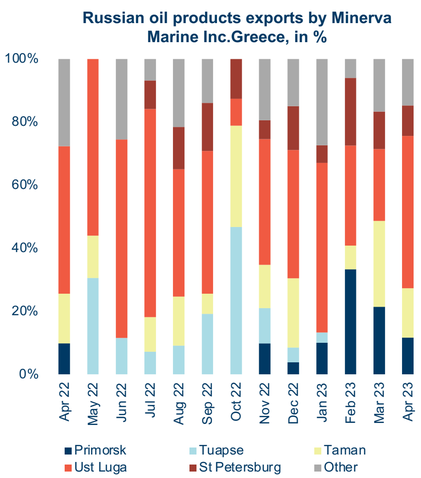


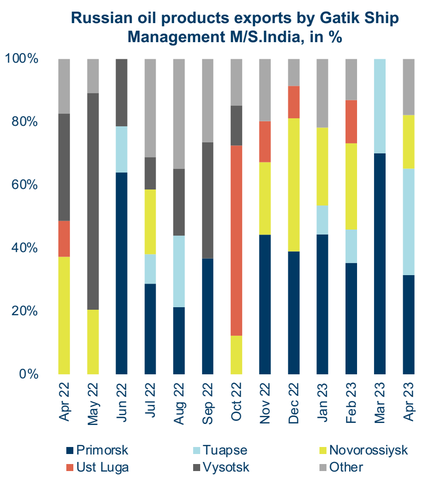


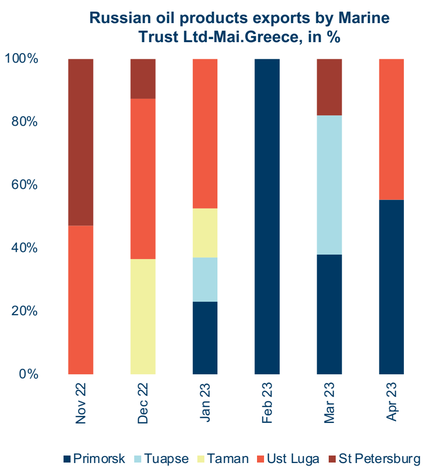


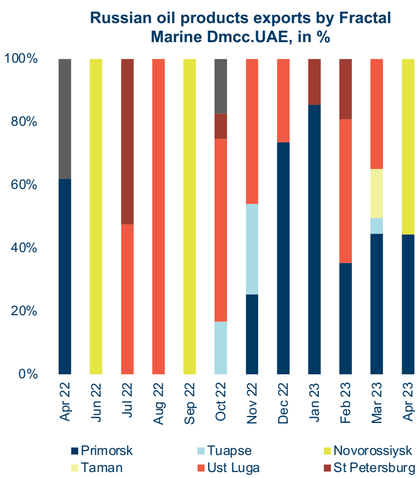






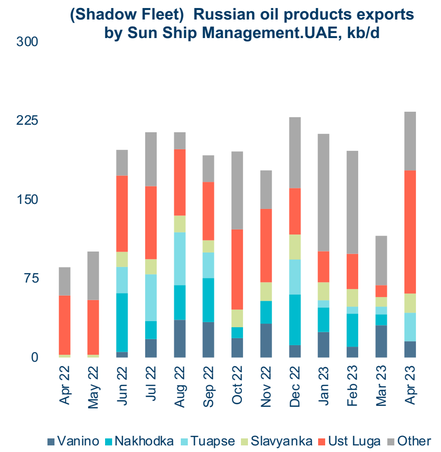


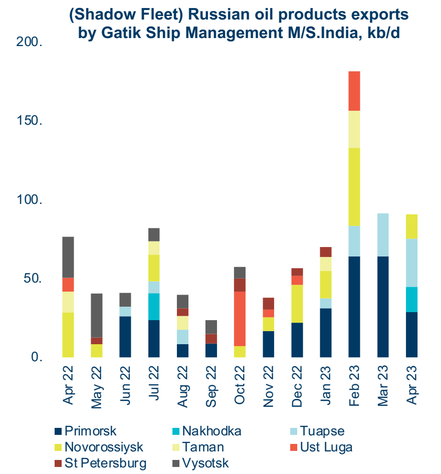


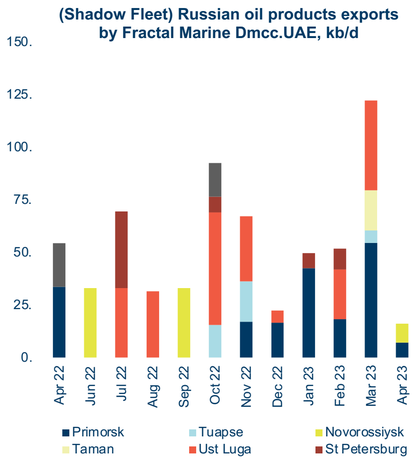


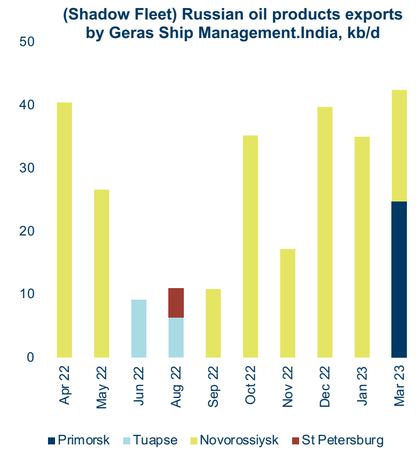
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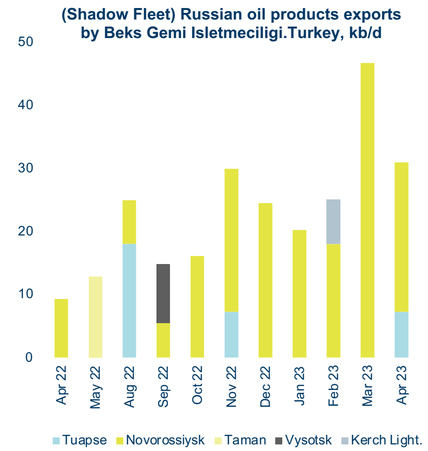
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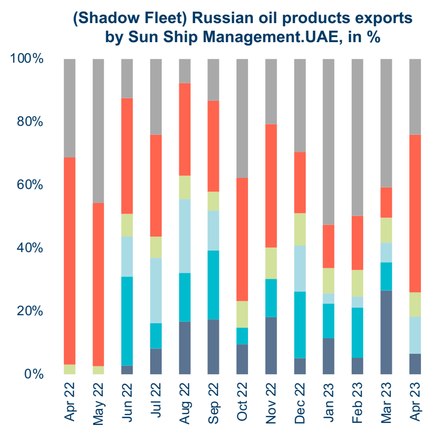


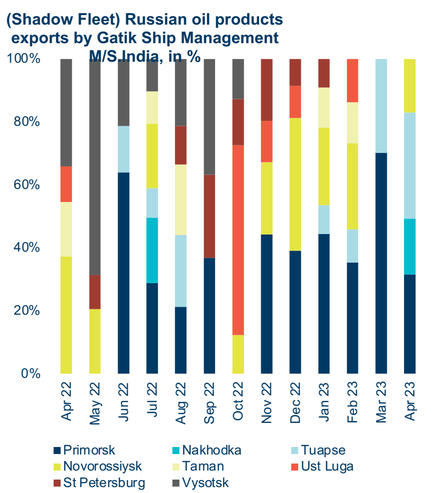


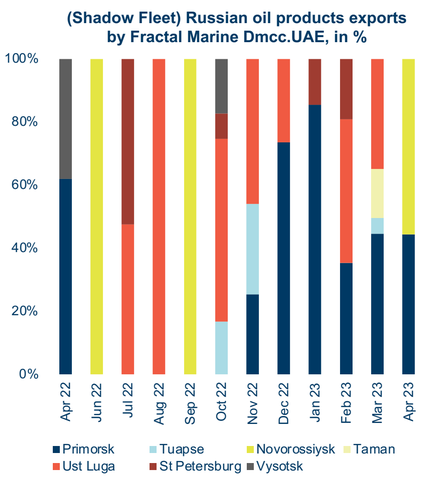


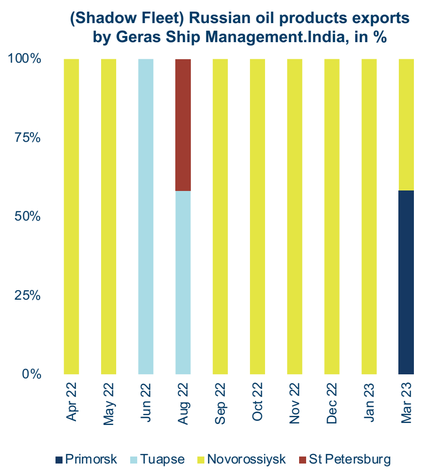


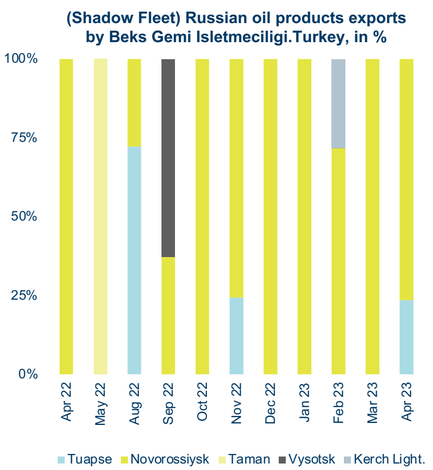












Source: KSE Institute estimates