

Russian oil tracker

Borys Dodonov, KSE Institute Benjamin Hilgenstock, KSE Institute Anatoliy Kravtsev, KSE Institute Yuliia Pavytska, KSE Institute Nataliia Shapoval, KSE Institute



KSE Institute

Summary

- Russian oil export revenues declined by \$1.4 bn to \$14.4 bn.
- with P&I Club insurance coverage.
- oil products imports with total imports of 428 kb/d in December.
- Maritime, Symphony Marine and One Moon Marine. None of these companies carried out crude oil in 2022.
- December.
- increase to the robust \$189 bn and \$183 bn in 2024 and 2025 respectively.

¹See Craig Kennedy, August 23, 2023, Measuring the Shadows. Moscow's Strategies for Evading Oil Sanctions and How to Stop them from Succeeding, <u>https://navigatingrussia.substack.com/p/measuring-the-</u> shadows?utm source=substack&utm medium=email for details and examples

• In December 2023 Russian seaborne oil exports volumes increased by ~6% driven by both higher crude and product shipments (MoM). However, the total

In December 2023 Russian reliance on Western maritime services little changed over previous month as 25% of crude and 62% of oil products were shipped

The KSE Institute estimates 196 loaded Russian shadow fleet tankers left Russian ports in December 2023, 73% of which were built more than 15 years ago. Russian shadow fleet poses huge environmental risks for the EU as decrepit tankers without P&I insurance navigate several European countries coastlines including Danish Straits.¹. In December 2023, the shadow fleet was responsible for exports of around 2.4 mb/d of crude oil and 0.8 mb/d of oil products.

India remains the biggest buyer of Russian seaborne crude despite a 29% decrease of imports since record high 2.2 mb/d of imports in May. On the contrary, Turkey increased its imports of Russian crude to the record high levels in November and December 2023. Turkey also remains the biggest buyer of Russian

• UAE-based shipping companies form the core of Russian shadow fleet. Since November 2023, five new UAE-based shipping companies with non-transparent organizational and ownership structure started carrying Russian crude without P&I insurance - Alqutb Alshamali Marine, Almuhit Alhadi Marine, Oceanlink

Significant price discounts for both Russian crude and oil products continue to support the strong demand for Russian oil exports. Average Urals FOB Baltic and Black Sea decreased by around \$7/bbl and \$9/bbl respectively to around \$60/bbl, while ESPO FOB decreased by \$6/bbl to \$72/bbl. However, the discount on FOB Baltic and Black Sea has widened by additional \$2/bbl and \$4/bbl respectively amid signs of more rigorous price cap policy enforcement in

In December 2023 Russian oil export revenues declined by \$1.4 bn to \$14.4 bn, the lowest level since June 2023. KSE Institute now estimates Russian oil revenues of \$183 billion in 2023, while in July they had been expected to reach only \$153 billion. According to the KSE Institute modelling, in the base case with current oil price caps and status quo of sanctions but their stronger enforcement, revenues will contract to \$145 bn and \$139 bn in 2024 and 2025 respectively compared to \$218 bn and estimated \$183 bn in 2022 and 2023 respectively. If the price cap is lowered to US\$ 50/bbl discount to forecast Brent prices, revenues will fall to \$69 bn and \$59 bn in 2024 and 2025 respectively. However, in case of weak sanctions enforcement, Russian oil revenues could



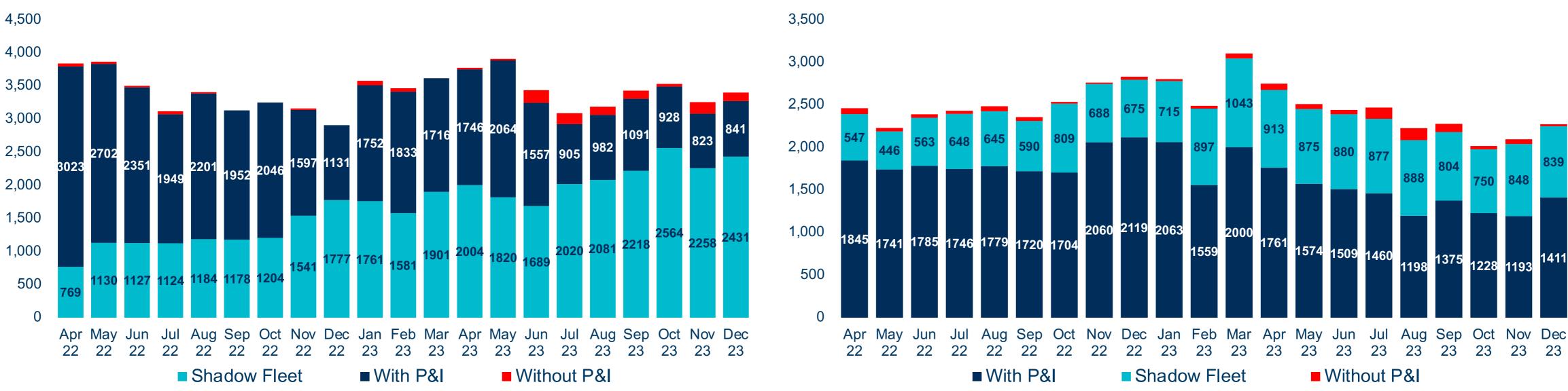




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Russian seaborne oil exports volumes increased by 6% in December 2023. Only 40% of **Russian oil exports were shipped with P&I Club insurance**

- In December 2023 Russian seaborne oil exports increased by 319 kb/d or by 6.0% MoM but were 1.2% lower YoY
- Shipments of seaborne crude oil increased by 4.4% MoM while products exports were 8.4% higher MoM
- oil products were shipped by tankers with P&I Club insurance in December 2023



Russian seaborne crude oil exports, kb/d

• Russia managed to lower its reliance on Western maritime services mainly for crude shipments as 25% of crude oil and 62% of

Exports of Russian oil products, kb/d







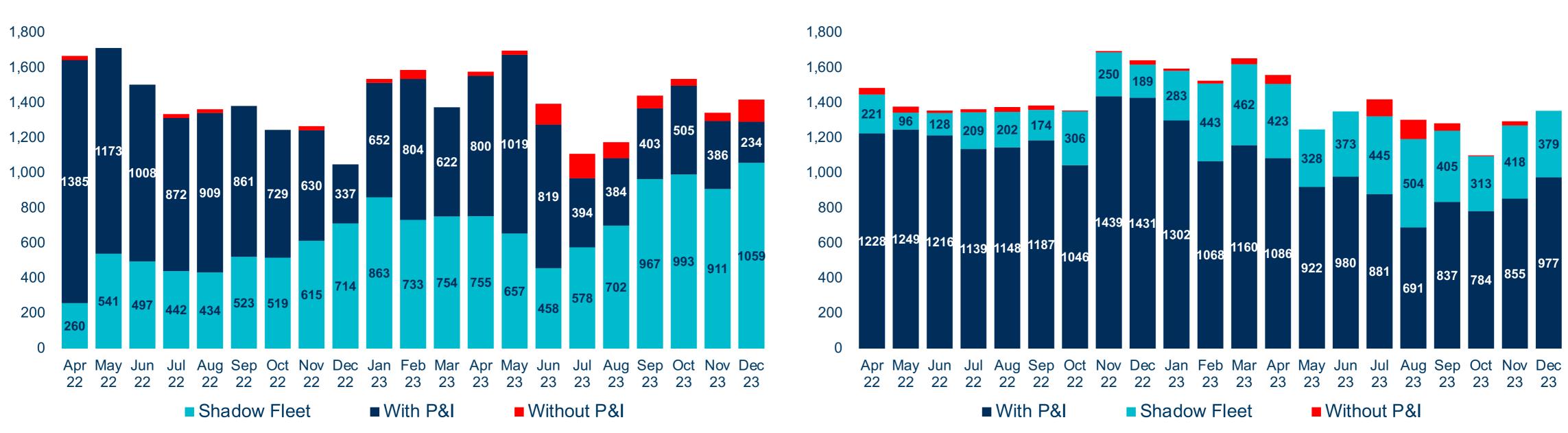


Source: Kpler, Equasis, P&I Club webpage, KSE Institute estimates

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44% of crude & oil products were shipped by tankers with P&I Club insurance from Baltic Sea ports in December 2023

- In December 2023 the exports of crude oil from Baltic ports increased by 5.6% MoM and were 35.1 % higher YoY
- The exports of oil products from Baltic ports increased by 4.6% MoM but were by 17.5% lower YoY
- 17% of crude oil and 72% of oil products were shipped by tankers with P&I Club insurance in December compared to 29% and 66% respectively in November



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

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



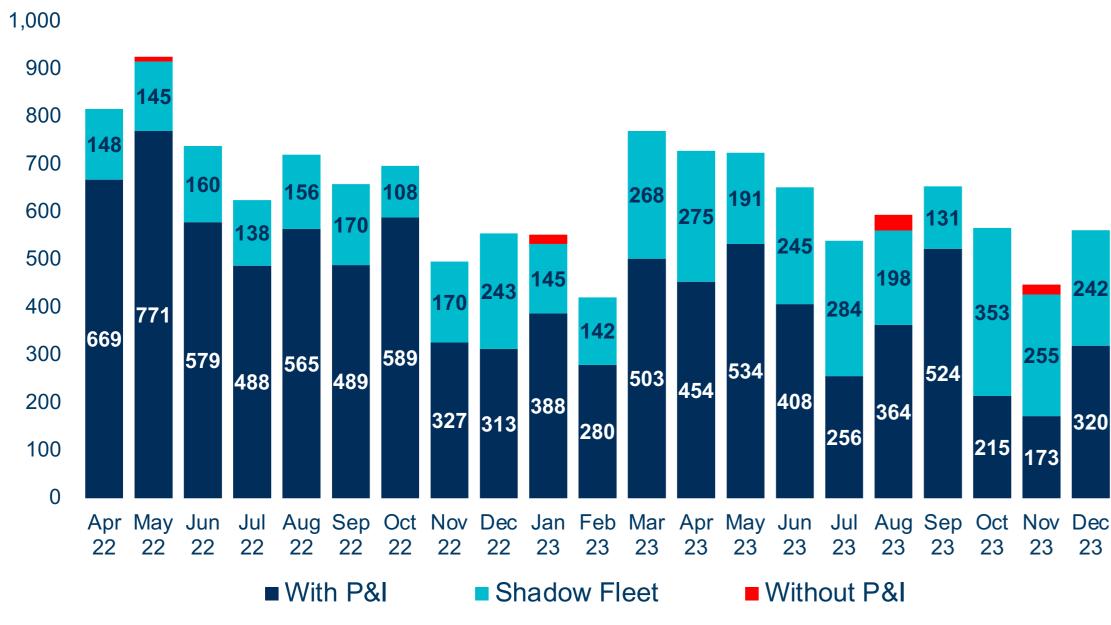


Source: Kpler, Equasis, P&I Club webpage, KSE Institute estimates

54% of crude & oil products were shipped by tankers with P&I Club insurance from Black Sea ports in December 2023

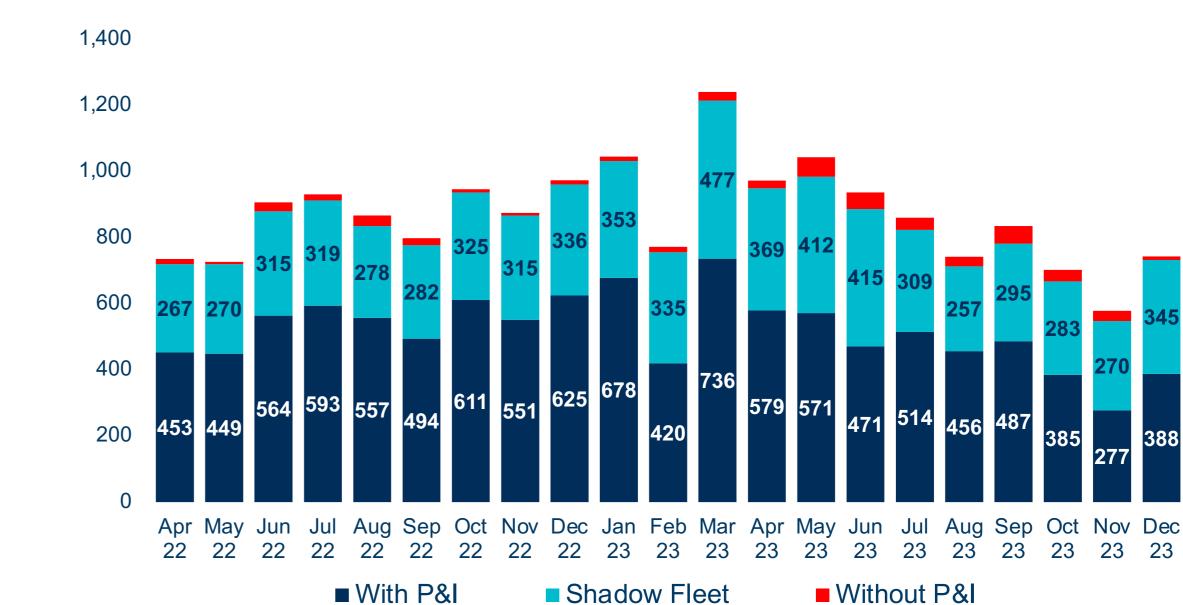
- conditions in the Black Sea improved in December 2023
- The exports of oil products from Black Sea ports increased by 28.5% MoM but was 23.7% lower YoY
- 57% of crude oil and 52% of oil products were shipped by tankers with P&I insurance

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



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

• The exports of crude oil from Black Sea ports recovered by 25.4% MoM and was by 1.2% higher YoY after the weather



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

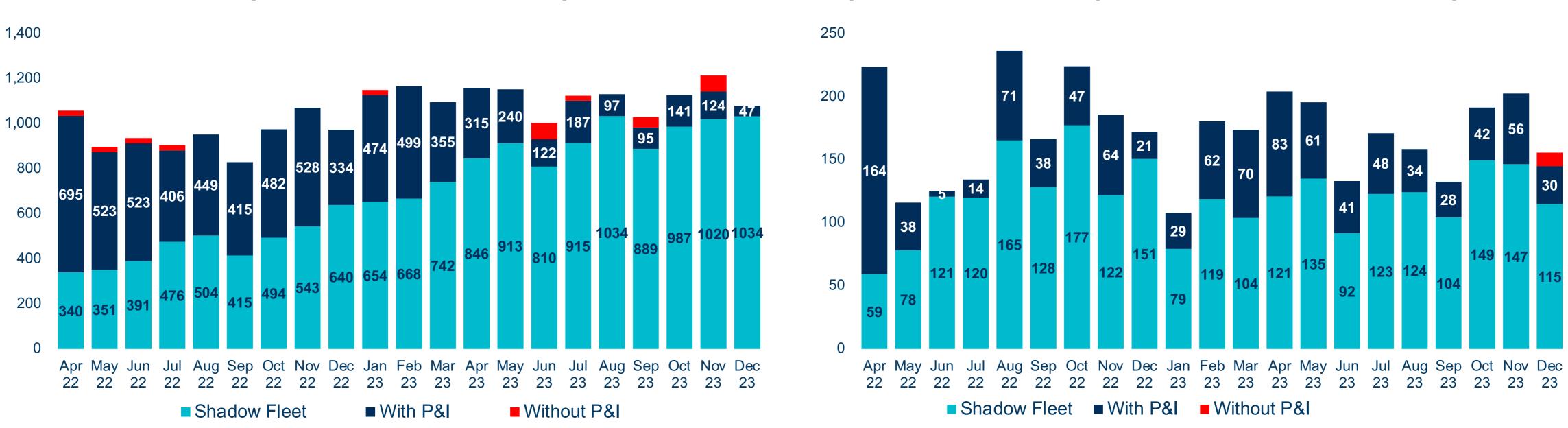






6% of crude oil & oil products were shipped by tankers with P&I Club insurance from Pacific Ocean ports in December 2023

- The exports of oil products from Pacific Ocean ports decreased by 23.2% MoM and by 9.5% YoY
- Only 4% of crude oil and 19% of oil products were shipped by tankers with P&I Club insurance in December 2023



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

In December 2023 the exports of crude oil from Pacific Ocean ports increased by 11.0% MoM but declined by 11.0% YoY



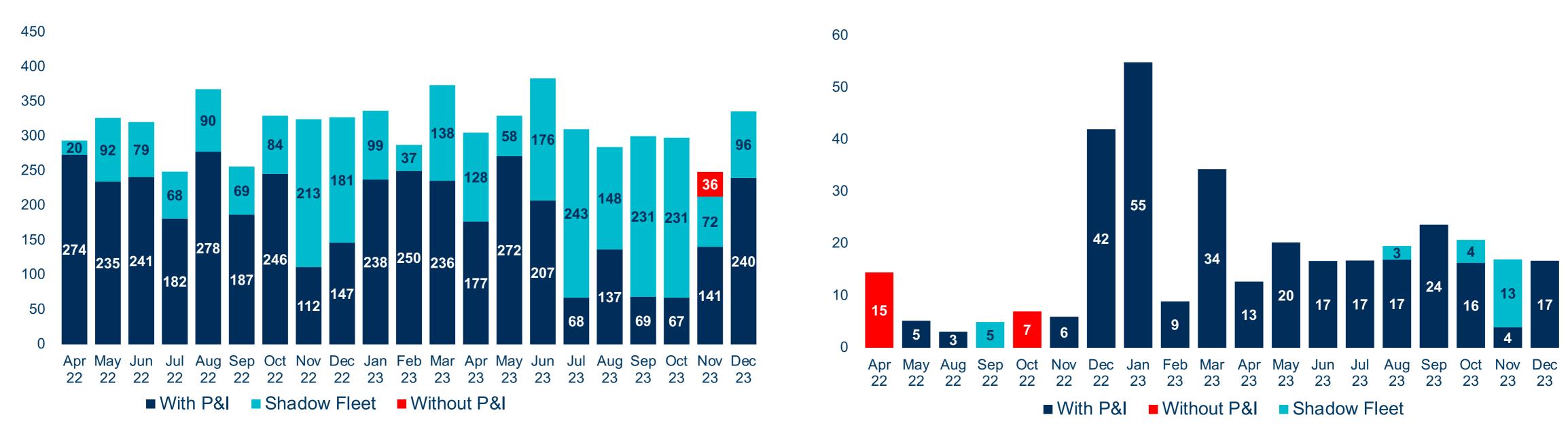


Source: Kpler, Equasis, P&I Club webpage, KSE Institute estimates



73% of crude oil and oil products were shipped by tankers with P&I Club insurance from **Arctic Ocean ports in December 2023**

- The exports of crude oil from Arctic Ocean ports increased by 35.0% MoM and by 2.6% YoY
- The exports of oil products from Arctic Ocean is insignificant as Russia ships predominantly crude from these ports



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

• 71% of crude oil was shipped by tankers with P&I Club insurance in December 2023 compared to 57% in the previous month

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



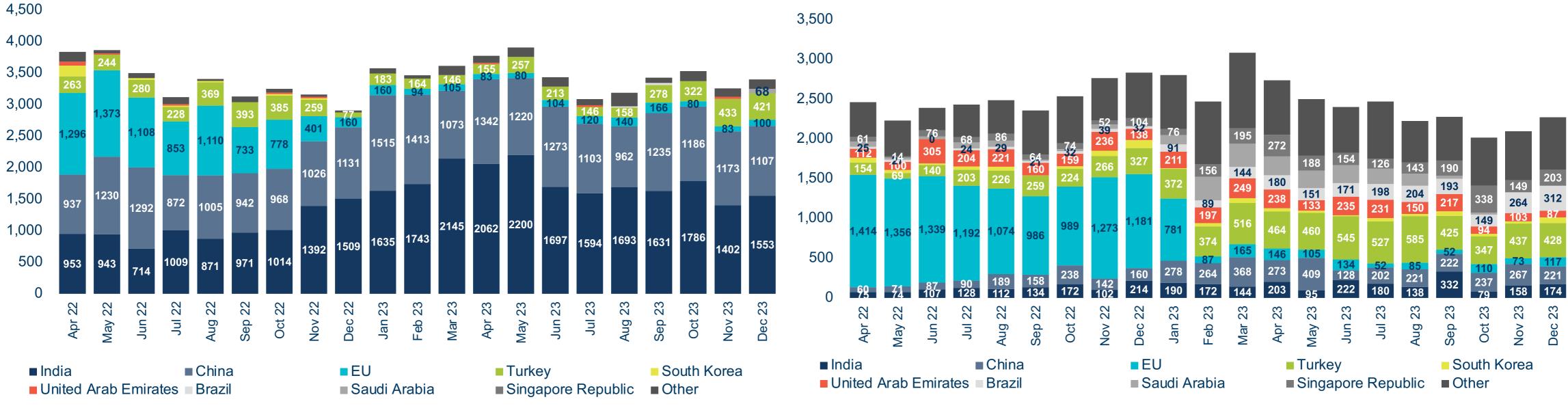
Source: Kpler, Equasis, P&I Club webpage, KSE Institute estimates

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India, the biggest Russian seaborne crude importer, increased its imports by 11%. Turkey continued oil imports from Russia at record levels equivalent to pre-COVID 2019 total oil consumption

- EU's share in Russian oil products exports decreased also to 5% from from 42% YoY
- Altogether India, China and Turkey were responsible for 91% of Russian crude oil exports in December
- India increased its imports of Russian seaborne crude by 152 kb/d MoM to 1553 kb/d in December 2023 and remains the biggest buyer of it.

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



Source: Kpler, KSE Institute estimates

EU's share in Russian crude exports in Russian oil exports is negligible since December 2022 as only Bulgaria has a derogation for Russian crude imports

Turkey imported Russian crude at record levels i- 433 kb/d and 421 kb/d in November and December 2023 respectively. It also remains the biggest buyer of Russian oil products imports with total imports of 428 kb/d in December 2023. Russian oil imports to Turkey was only slightly below its total oil consumption in pre-COVID 2019. Such record imports of Turkey (almost 0.9 mb/d) helps Russian oil either explicitly or implicitly reach closed by sanctions destinations

Russian oil products exports by destinations countries, kb/d





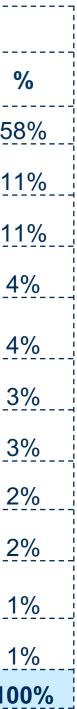
2023 despite the increased risk of sanctions for breaching EU/G7 price cap

Russian crude oil exports by ship managers

Oct 23			Nov 23			Dec 23			
Ship manager	Volume, kb/d	%	Ship manager	Volume, kb/d	%	Ship manager	Volume, kb/d	%	
Other	1781	50%	Other	1854	57%	Other	1966	58%	
UAE.Oil Tankers Scf Mgmt Fzco	499	14%	UAE.Sun Ship Management	380	12%	UAE.Oil Tankers Scf Mgmt Fzco	378	11%	
UAE.Sun Ship Management	433	12%	UAE.Oil Tankers Scf Mgmt Fzco	344	11%	UAE.Sun Ship Management	359	11%	
China.Sunne Co Ltd	144	4%	China.Prominent Shipmanagement Ltd	137	4%	Turkey.Gungen Denizcilik Ve Ticaret	132	4%	
Greece.Marine Trust Ltd-Mai	138	4%	China.Sunne Co Ltd	125	4%	China.Sunne Co Ltd	120	4%	
UAE.Radiating World Shipping Servs	125	4%	Greece.Kyklades Maritime Corp	95	3%	UAE.Fractal Marine Dmcc	106	3%	
UAE.Star Voyages Shipping	122	3%	UAE.Fractal Marine Dmcc	73	2%	China.Prominent Shipmanagement Ltd	94	3%	
China.Prominent Shipmanagement Ltd	81	2%	Cyprus.Lagosmarine Ltd	70	2%	Greece.New Shipping Ltd-Lib	76	2%	
Russia.Rosnefteflot Jsc	71	2%	Greece.Marine Trust Ltd-Mai	70	2%	Greece.Dynacom Tankers Management Ltd	68	2%	
China.Shanghai Future Ship Mgmt Co	70	2%	Greece.Dynacom Tankers Management Ltd	57	2%	China.Hong Kong Hanyuan Shipping Co	50	1%	
Turkey.Gungen Denizcilik Ve Ticaret	67	2%	Turkey.Beks Gemi Isletmeciligi Ve Tic	51	2%	China.Intercon Marine Shanghai Co	50	1%	
Total	3530	100%	Total	3256	100%	Total	3399	100%	

Sun Ship Management and Oil Tankers Scf Mgmt Fzc topped the list of ten biggest shippers by shipping around a quarter of Russian crude during last three months. Two Greek companies remained in the top ten list in December









Minerva Marine and Thenamaris Ships Management disappeared from the list in December

Russian oil products exports by ship managers

Oct 23			Nov 23			Dec 23			
Ship manager	Volume, kb/d	%	Ship manager	Volume, kb/d	%	Ship manager	Volume, kb/d	%	
Other	1350	67%	Other	1380	66%	Other	1576	69%	
UAE.Oil Tankers Scf Mgmt	159	8%	UAE.Oil Tankers Scf Mgmt Fzco	148	7%	UAE.Oil Tankers Scf Mgmt Fzco	116	5%	
Greece.Tms Tankers Ltd	101	5%	Greece.Minerva Marine Inc	97	5%	Greece.Eastern Mediterranean Maritime	113	5%	
Greece.Velos Tankers Ltd	69	3%	Greece. Thenamaris Ships Management	95	5%	Turkey.Beks Tanker Isletmeciligi As	76	3%	
Turkey.Active Denizcilik Ve Gemi	63	3%	Greece.Stealth Maritime Corp Sa	74	4%	Greece.lms Sa	74	3%	
Greece.Thenamaris Ships Management	54	3%	Greece.Tms Tankers Ltd	63	3%	Kuwait.Arab Maritime Petroleum Trans	66	3%	
Greece.Eastern Mediterranean Maritime Ltd	46	2%	Kuwait.Arab Maritime Petroleum Trans	63	3%	UAE.Fractal Marine Dmcc	60	3%	
Greece.Chemnav Shipmanagement Ltd	46	2%	Turkey.Active Denizcilik Ve Gemi	52	2%	Singapore.Executive Ship Management	59	3%	
Greece.lms Sa	45	2%	Turkey.Beks Gemi Isletmeciligi Ve Tic	48	2%	UAE.Solid Energy Solutions	45	2%	
Greece.Minerva Marine Inc	43	2%	Greece.Spring Marine Management Sa	39	2%	Greece.Tms Tankers Ltd	44	2%	
Vietnam.Sao Viet Petrol Transportation	41	2%	India.Eastern Euro Ship Management	36	2%	Turkey.Active Denizcilik Ve Gemi	42	2%	
Total	2016	100%	Total	2095	100%	Total	2271	100%	

Registered in the UAE Oil Tankers Scf Mgmt Fzco remained the leading shipper of Russian oil products by operating vessels obtained from Sun Ship Management. Three out of ten biggest shippers of Russian oil products were Greek companies in December compared to five in November, and seven in October 2023. In particular,

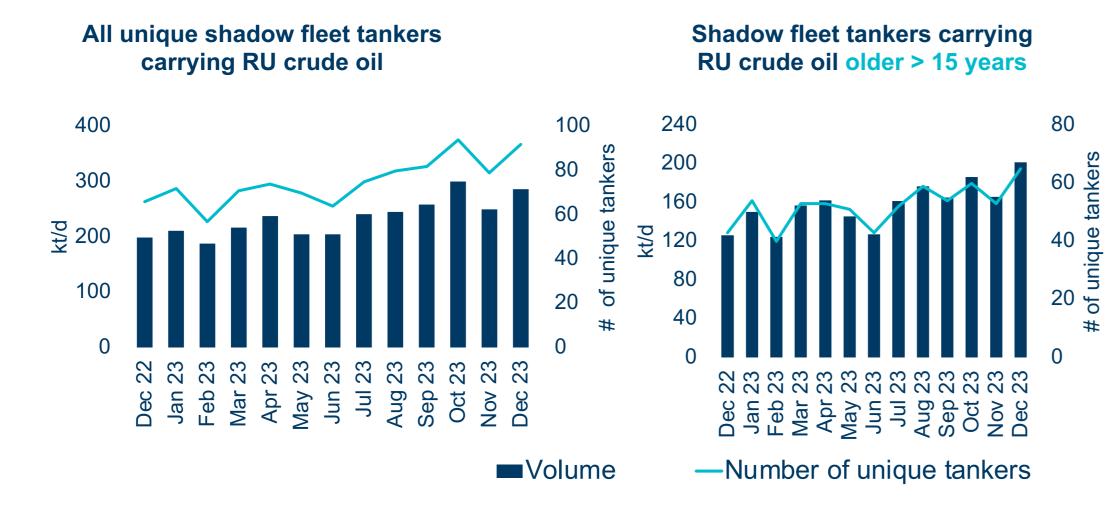




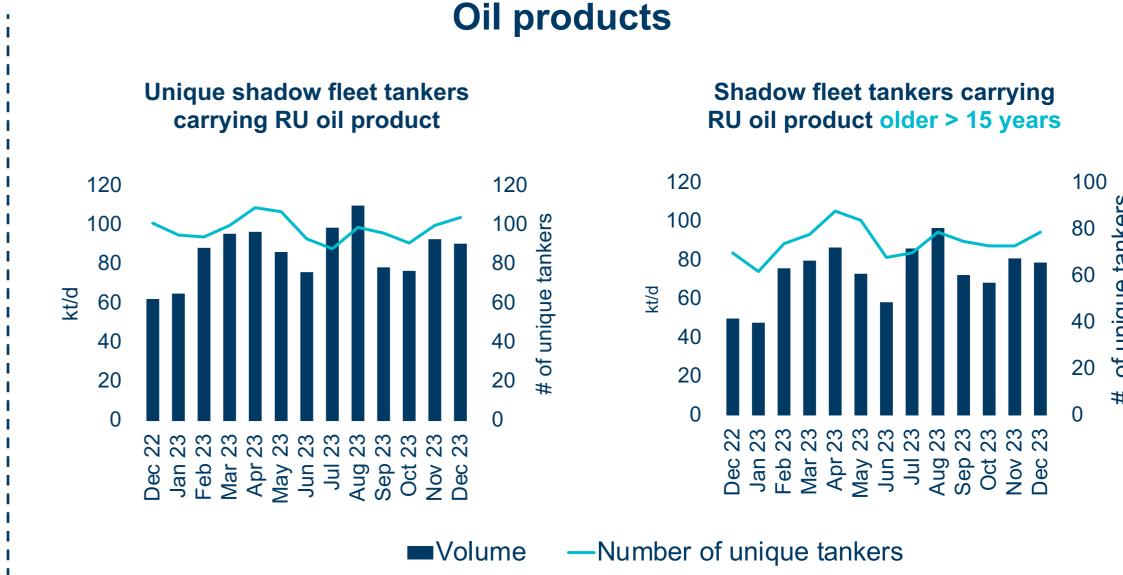
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The number of Russian shadow fleet tankers carrying crude and oil products from Russian ports is estimated at 196 in December 2023

- Russian oil exporters increased the number of shadow fleet tankers carrying crude from Russian ports by 13 to 92 tankers in December 2023 while 71% of them were older than 15 years
- The number of shadow fleet tankers carrying Russian oil products from Russian ports increased by 4 to 104 in December 2023 while 76% 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







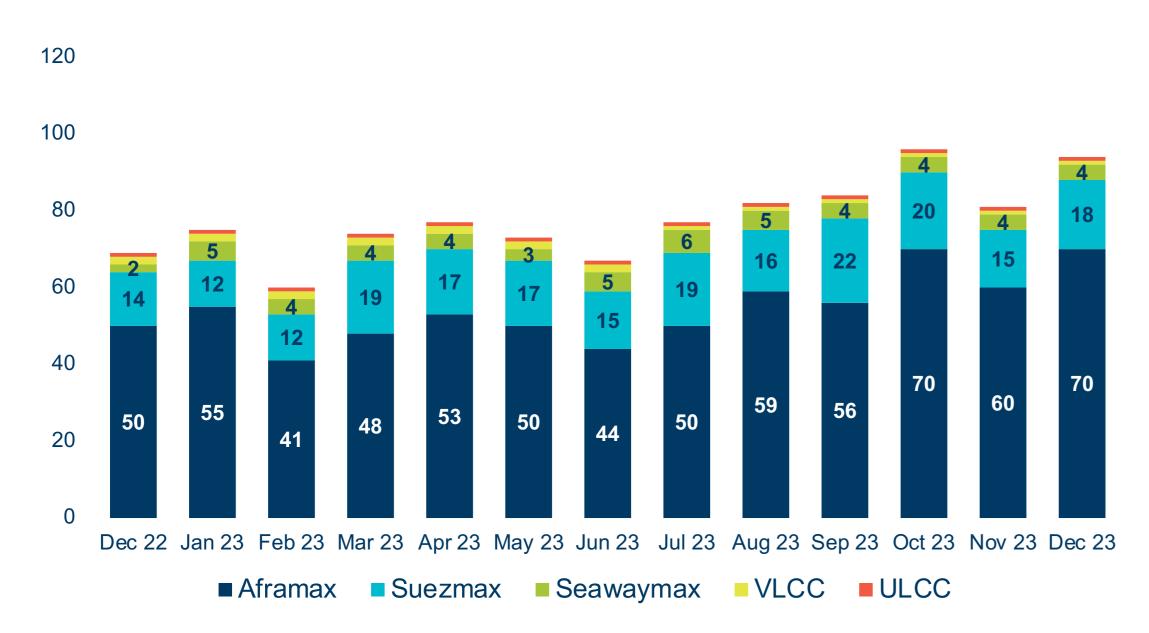


Source: Kpler, Equasis, P&I Club webpage, KSE Institute estimates



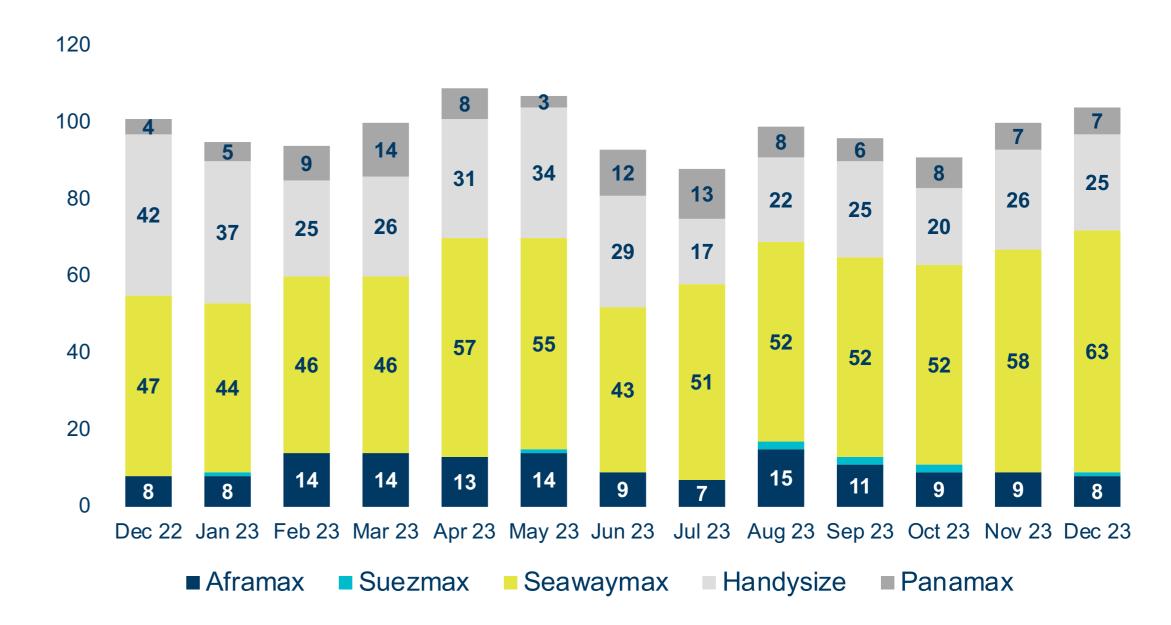
Aframax and Seuzmax are the core of Russian shadow fleet carrying crude while Seawaymax and Handysize form the Russian shadow fleet carrying oil products. Total Russian shadow fleet carrying oil and oil products from Russian ports and involved in STS transfers is estimated at 198 tankers¹ in December 2023

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



¹Note: VLCC and ULCC are too large to load at Russian ports and are loaded trough STS transfers in the sea

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







The share of Russian crude oil exports by shadow fleet increased by around 2% MoM to 71% in December 2023

- shipments increased to 71%
- The share of leaders Sun Ship Management and connected to it Scf Mgmt Fzco little changed over the previous month

Russian crude oil exports by shadow fleet, kb/d

Oct 23			Nov 23			Dec 23			
Ship manager	Volume, kb/d	%	Ship manager	Volume, kb/d	%	Ship manager	Volume, kb/d	%	
Other	920	36%	Other	950	42%	Other	1133	47%	
UAE.Oil Tankers Scf Mgmt Fzco	499	19%	UAE.Sun Ship Management	380	17%	UAE.Oil Tankers Scf Mgmt Fzco	378	16%	
UAE.Sun Ship Management	433	17%	UAE.Oil Tankers Scf Mgmt Fzco	344	15%	UAE.Sun Ship Management	359	15%	
China.Sunne Co Ltd	144	6%	China.Prominent Shipmanagement Ltd	137	6%	China.Sunne Co Ltd	120	5%	
UAE.Radiating World Shipping Servs	125	5%	China.Sunne Co Ltd	125	6%	UAE.Fractal Marine Dmcc	106	4%	
UAE.Star Voyages Shipping	122	5%	UAE.Fractal Marine Dmcc	73	3%	China.Prominent Shipmanagement Ltd	94	4%	
China.Prominent Shipmanagement Ltd	81	3%	Turkey.Beks Gemi Isletmeciligi Ve Tic	51	2%	China.Hong Kong Hanyuan Shipping Co	50	2%	
Russia.Rosnefteflot Jsc	71	3%	China.Hong Kong Hanyuan Shipping Co	51	2%	China.Intercon Marine Shanghai Co	50	2%	
China.Shanghai Future Ship Mgmt Co	70	3%	China.Santiago Ships Management Co	49	2%	China.Merluza Group Ltd	49	2%	
Turkey.Beks Gemi Isletmeciligi Ve Tic	50	2%	Seychelles.Cheng Shipping & Trader Ltd	49	2%	UAE.Alqutb Alshamali Marine Srvs	47	2%	
China.Intercon Marine Shanghai Co	50		UAE.Alqutb Alshamali Marine Srvs	49	2%	China.Shanghai Legendary Ship Mgmt	46	2%	
Total	2218	100%	Total	2258	100%	Total	2431	100%	

• Russian crude oil exports by shadow fleet decreased by ~171 kb/d MoM to 2431 kb/d in December and its share in total crude





In December 2023 Russian oil products exports by shadow fleet little changed over previous month, but its share in total oil products shipping decreased by 3%

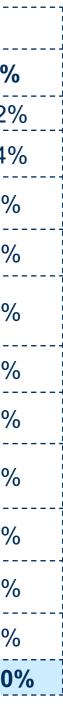
- Russia shipped 839 kb/d or around 37% of its oil products exports by shadow fleet in December
- of 14% in December

Oct 23			Nov 23		Dec 23			
Ship manager	Volume, kb/d	%	Ship manager	Volume, kb/d	%	Ship manager	Volume, kb/d	%
Other	357	48%	Other	437	52%	Other	434	52%
UAE.Oil Tankers Scf Mgmt Fzco	159	21%	UAE.Oil Tankers Scf Mgmt Fzco	148	17%	UAE.Oil Tankers Scf Mgmt Fzco	116	14%
Vietnam.Sao Viet Petrol Transportation	41	5%	Turkey.Beks Gemi Isletmeciligi Ve Tic	48	6%	Turkey.Beks Tanker Isletmeciligi As	76	9%
Turkey.Active Denizcilik Ve Gemi	38	5%	Turkey.Active Denizcilik Ve Gemi	42	5%	UAE.Fractal Marine Dmcc	60	7%
Seychelles.Lorni Marine Ltd	30	4%	India.Eastern Euro Ship Management	36	4%	Vietnam.Venus Gas Co Ltd	24	3%
Liberia.Hs La Pride Ltd	24	3%	Vietnam.Hung Phat Maritime Trading	33	4%	Seychelles.Flaming Star Corp	24	3%
Marshall Islands.Oriental Dynasty Inc	21	3%	Liberia.Hs Legend Ltd	24	3%	Liberia.Hs Arge Ltd	23	3%
Marshall Islands.Otto Shipping & Marine Inc	20	3%	China.Coureage Co Ltd	23	3%	Liberia.Leopard I Shipping Inc	22	3%
Vietnam.Hung Phat Maritime Trading	20	3%	China.Star Ocean Shipmanage Ltd	22	3%	UAE.Oceanlink Maritime Dmcc	21	3%
UAE.Fractal Marine Dmcc	20	3%	Marshall Islands.Apollo Shipping & Marine Inc	22	3%	Marshall Islands.Zeus Shipping & Marine Inc	19	2%
UAE.Sun Ship Management	20		Kyrgyzstan.Munai Invest Llc	13	2%	Marshall Islands.Augusta Shipping & Marine Inc	19	2%
Total	750	100%	Total	848	100%	Total	839	100%

Russian oil products exports by shadow fleet, kb/d

Source: Kpler, KSE Institute estimates

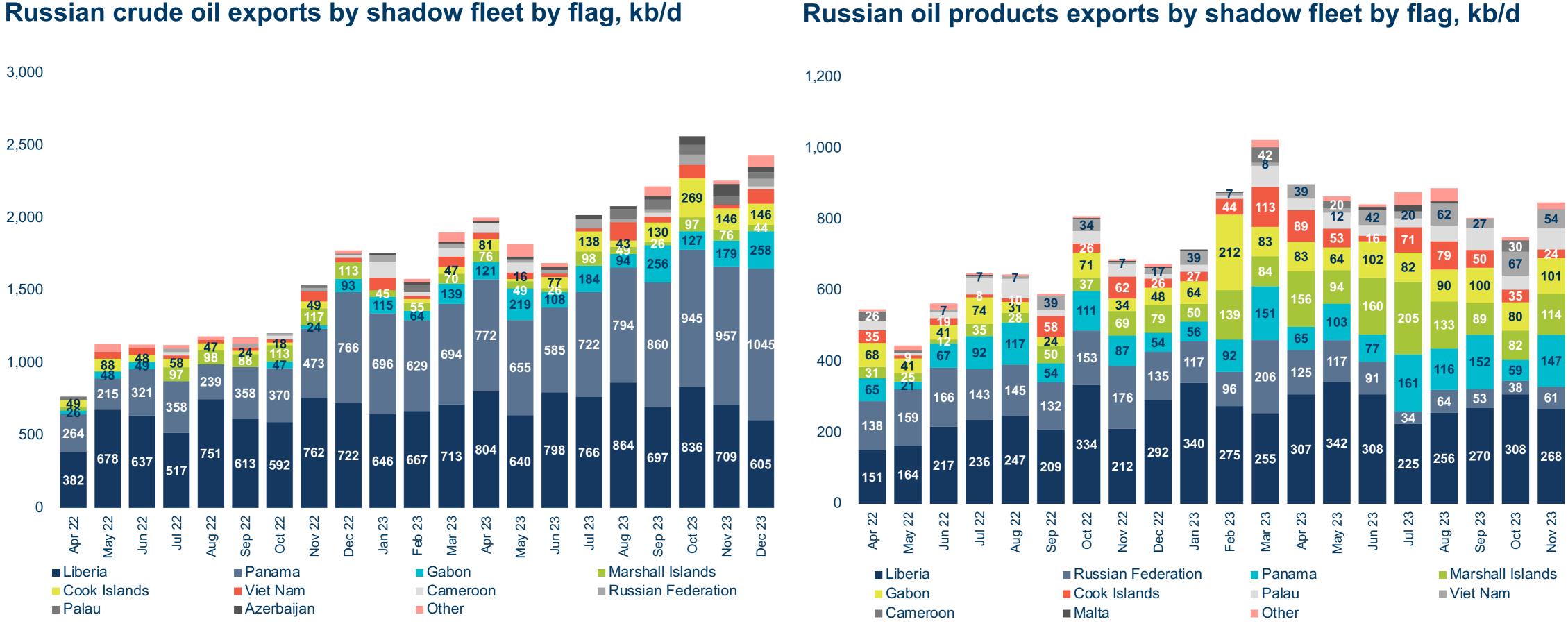
Oil Tankers Scf Mgmt Fzco retained the leader position as top ship manager with a share in total oil product shipments by shadow fleet





The top three flags of Russian shadow fleet vessels carrying crude oil are Panama, Liberia and Gabon. The top three flags of Russian shadow fleet vessels carrying oil products are Panama, Liberia and Marshall Islands

Russian crude oil exports by shadow fleet by flag, kb/d



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









UAE-based shipping companies play a key role in Russian shadow fleet operations

- ۲ shadow fleet. They carry around three-quarters of UAE-based companies' shipments.
- carried out crude oil in 2022

	Export of Russian crude oil by shadow fleet by UAE-based companies, kb/d													
Ship manager	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Jul 23	Aug 23	Sep 23	Oct 23	Nov 23	Dec 23		
Sun Ship Management	776	833	932	1008	745	834	618	553	535	433	380	359		
Oil Tankers Scf Mgmt Fzco	-	-	-	-	-	-	149	316	299	499	344	378		
Fractal Marine Dmcc	93	63	72	59	116	-	57	-	48	34	73	106		
Radiating World Shipping Servs	-	26	47	81	-	77	57	20	106	125	-	24		
K&O Shipmanagement Fze *	33	37	33	70	25	35	123	34	93	-	-	-		
Star Voyages Shipping *	-	-	-	-	-	-	81	24	24	122	48	-		
Alqutb Alshamali Marine Srvs	-	-	-	-	-	-	-	-	-	-	49	71		
Lta Shipping Fzco *	-	-	-	-	24	24	24	-	-	-	-	-		
Almuhit Alhadi Marine Services	-	-	-	-	-	-	-	-	-	-	24	31		
Oceanlink Shipping & Trading	-	-	-	-	-	-	-	-	24	-	-	-		
Vanguard Marine Ventures Inc	-	-	-	-	23	-	-	-	-	-	-	-		
Oceanlink Maritime Dmcc	-	-	-	-	-	-	-	-	-	-	24	-		
Symphony Marine For Ship Mgmt *	-	-	-	-	-	-	-	-	-	-	24	-		
One Moon Marine Services Llc	-	-	-	-	-	-	-	-	-	-	-	20		

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

Registered in the OAE Sun Ship Management and Oil Tankers Scf Mgmt Fzco are the leaders of Russian crude exports shipments by

Since November 2023, five new UAE-based shipping companies started carrying Russian crude without P&I insurance - Alqutb Alshamali Marine, Almuhit Alhadi Marine, Oceanlink Maritime, Symphony Marine and One Moon Marine. None of these companies

* As of now, there are no tankers under management



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Newly established UAE-based Alqutb Alshamali Marine Srvs has non-transparent performance and focused on carrying Russian crude without P&I insurance

- It has five tankers in its management and started managing these tankers without P&I insurance only since November 2023. Four out five tankers (except Eastern Pearl) have already started carrying Russian crude oil under it management.
- Four out of five tankers were previously operated by the UAE-based Radiating World Shipping Servs.
- All 5 tankers have different registered owner, but all owners share the same legal address in the UAE. Each owner has only one tanker in its fleet

Vessel name	Vessel IMO	Builds year	Ship manager	Ship manager address	P&I insurance	Former ship manager	Registered owner	Registered owner address
Vela Rain	9331141	2006	Alqutb Alshamali Marine Srvs, since 08/12/2023				Shivshai Marine Ltd	
Stratos Aurora	9288708	2005	Alqutb Alshamali Marine Srvs, since 18/12/2023	MF-77,		UAE.Radiating World	Septala Navigation Ltd	
Andaman Skies	9288693	2004	Alqutb Alshamali Marine Srvs, since 13/11/2023	Deira, Dubai,	-	Shipping Servs	Durbeen Navigation Ltd	Care of Alqutb Alshamali Marine Services LLC , MF-77, Nooraniyah Building, 152-0, Hor al-Anz, Deira, Dubai, United Arab Emirates.
Galian 2	9331153	2007	Alqutb Alshamali Marine Srvs,since 02/11/2023				Anandya Shipping Ltd	
Eastern Pearl	9285859	2006	Alqutb Alshamali Marine Srvs,since 18/12/2023			UAE.Star Voyages Shipping	Purana Navigation Ltd	







Another newly established UAE-based Almuhit Alhadi Marine Services has a similar nontransparent pattern

- It has four tankers without P&I insurance in its management and started managing tankers only since August 2023 •
- All tankers were previously operated by the UAE- based company Radiating World Shipping Servs. \bullet
- All four tankers have different registered owner, but all owners share the same legal address in the UAE. Each owner has only one \bullet tanker in its fleet

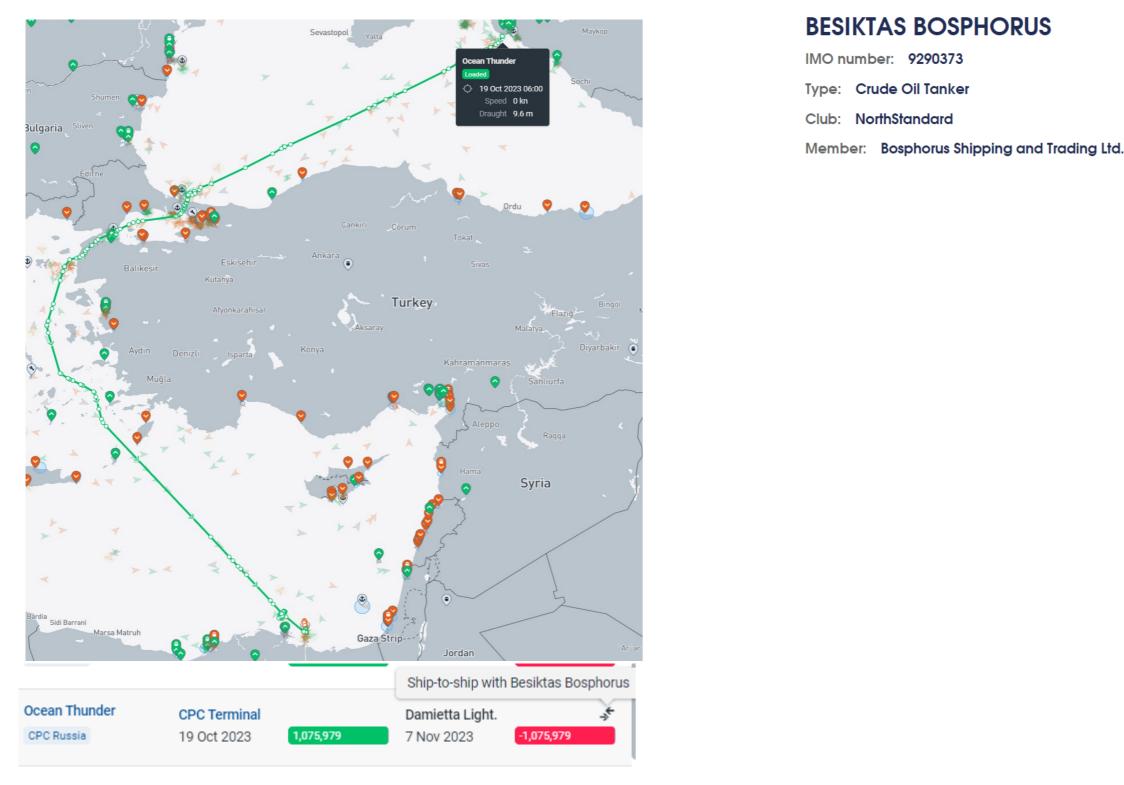
Vessel name	Vessel IMO	Builds year	Ship manager	Ship manager address	P&I insurance	Former ship manager	Registered owner	Registered owner address
Fighter Two	9296391	2006					Zorona Shipping Ltd	
Kudos Stars	9288710	2005	Almuhit Alhadi Marine	Unit 0304, Blue Tower, 46-0, Trade		UAE. Radiating World Shipping Servs		Care of Almuhit Alhadi Marine Services LLC , Unit 0304, Blue Tower, 46-0, Trade Centre 1, Dubai, United Arab Emirates.
Dynamik Trader	9286657	2005	Services, since	Centre 1, Dubai, United Arab Emirates.	-		Sabun Marine Ltd	
Canis Power	9289520	2005	11/08/2023				Chatula Marine Ltd	



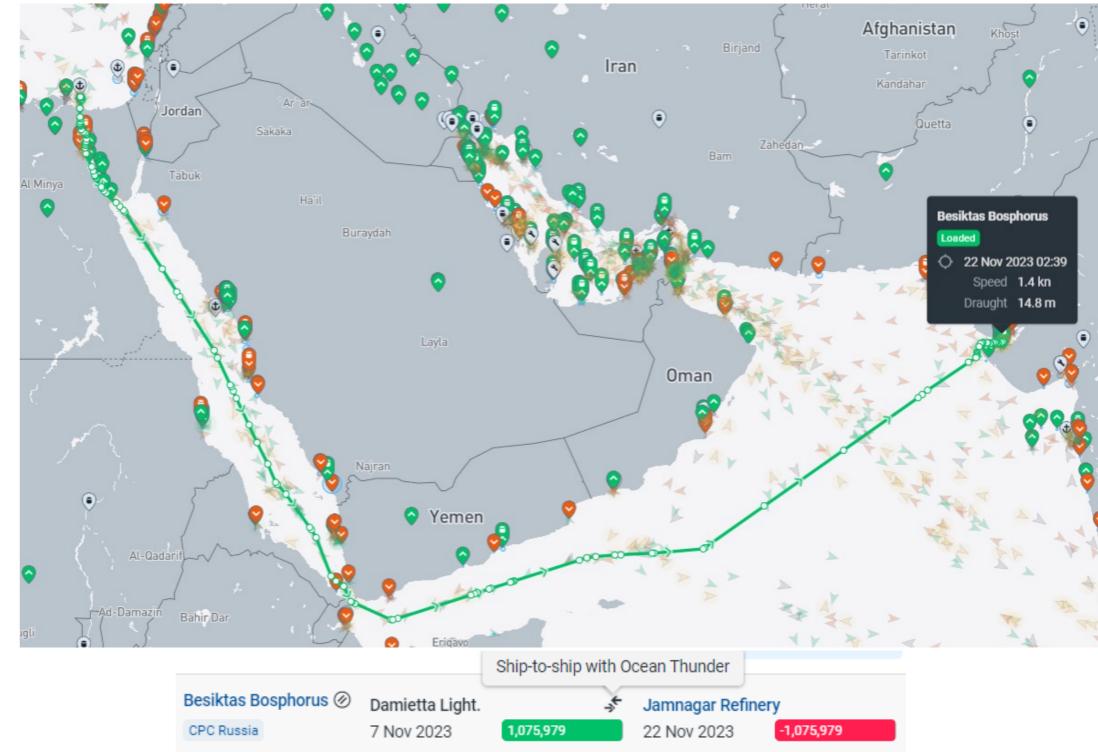




Tanker OCEAN THUNDER (IMO 9416422), (Turkish ship manager ACTIVE DENIZCILIK VE GEMI leaves the port of Novorossiysk without P&I insurance on October 19, 2023, loaded with CPC Russia crude oil. Having passed through the Bosphorus Strait and the Mediterranean Sea, it made a STS transfer in front of the Suez Channel with the Turkish tanker BESIKTAS BOSPHORUS (IMO 9290373), (Turkish ship manager BESIKTAS LIKID TASIMACILIK), which has a P&I insurance and delivered products to India on November 22, 2023, (Jamnagar Refinery port).



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

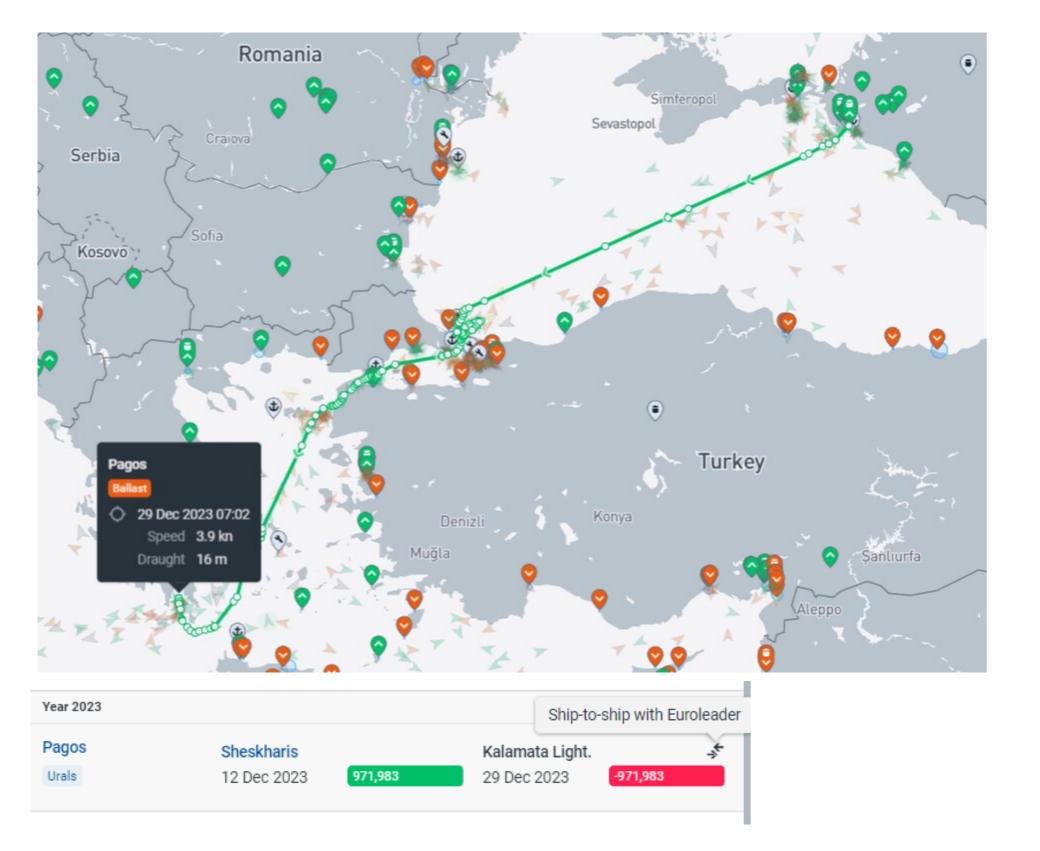






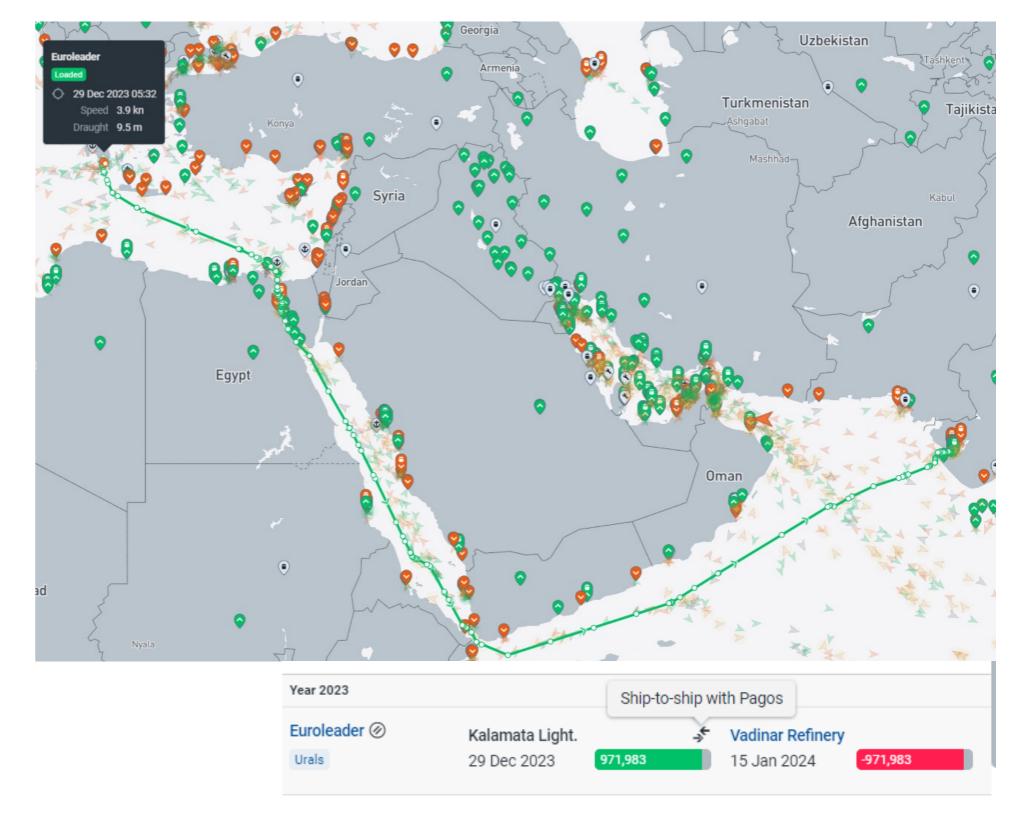


Tanker PAGOS (IMO 9296406) (Marshall Islands ship manager PAGOS SHIPPING & MARINE INC) loaded with Urals crude oil left the port of Sheskharis (Novorossiysk) without P&I insurance on December 12, 2023 and performed the STS transfer in the area of Kalamata on December 29 with tanker EUROLEADER (IMO 9290385) (Greek ship manager EUROTANKERS INC), which had the P&I insurance. After that, on January 15, 2024, EUROLEADER delivered the cargo to India (Vadinar Refinery port).



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

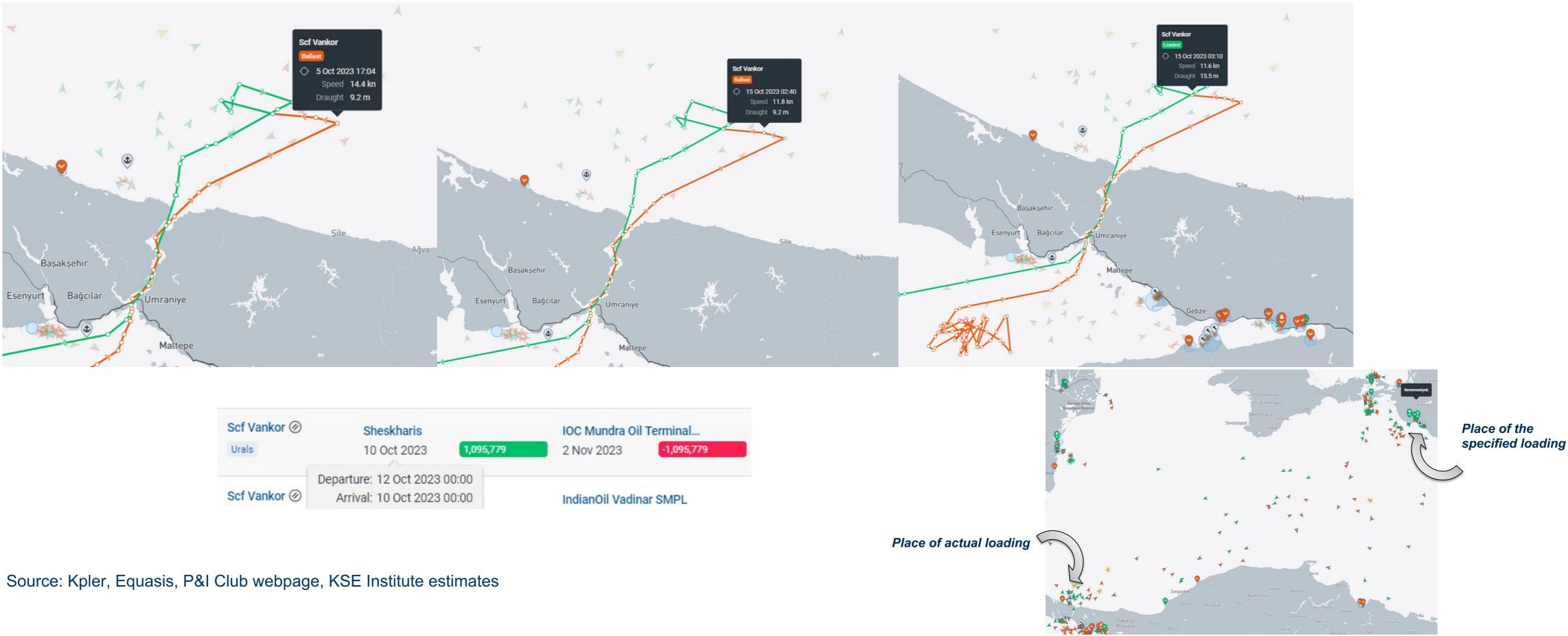








Tanker SCF Vankor (IMO 9316127), (manager Emirates company SCF Oil Tankers SCF MGMT FZCO), which does not have P&I insurance, reported loading Urals crude oil at Sheskharis port (Novorossiysk) on October 12, 2023. However, according to signals, this tanker was near the Bosphorus Strait. Only on October 15, from 02:40 to 03:10, the tanker was loaded far from the loading port. This case testifies to the spoofing or concealment of the GPS signal.

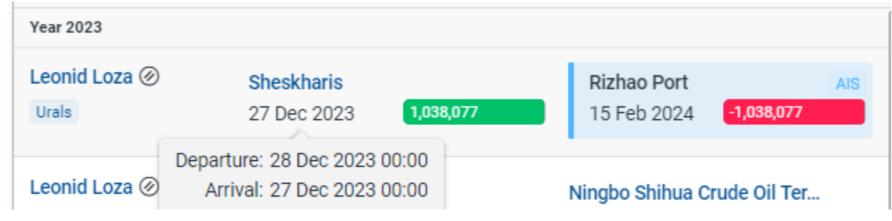


Scf Vankor ⊘	Sheskharis		IOC Mundra Oil	Terminal
Urals	10 Oct 2023	1,095,779	2 Nov 2023	-1,095,779
Scf Vankor ⊘	Departure: 12 Oct 2023 Arrival: 10 Oct 2023		IndianOil Vadin	ar SMPL



to 13:37, the tanker was loaded far from the loading port. This case testifies to the spoofing or concealment of the GPS signal.



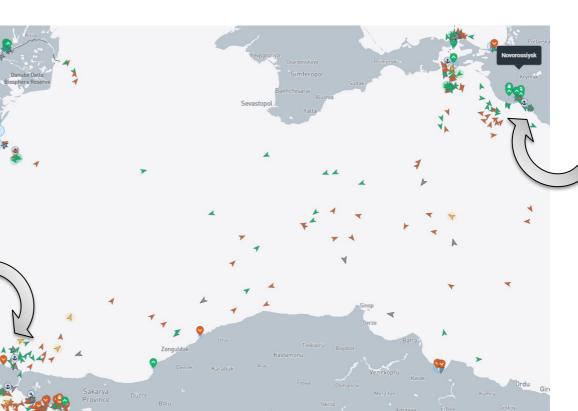


Source: Kpler, Equasis, P&I Club webpage, KSE Institute estimates

Tanker Leonid Loza (IMO 9412347), (manager Emirates company Sun Ship Management), which does not have P&I insurance reported loading Urals crude oil at Sheskharis port (Novorossiysk) on December 28, 2023. However, according to signals, this tanker was near the Bosphorus Strait. Only on January 2, from 13:07

Voyages Port calls Trac	des Raw signals C	harters Info	
Raw destination	ETA	Updated	Source
RU NVS => CN RZH	15 Feb 2024 11:00	22 Jan 2024 01:39	AIS
RU NVS => CN RZH	15 Feb 2024 18:00	17 Jan 2024 15:09	AIS
RU NVS => CN RZH	8 Feb 2024 18:00	8 Jan 2024 23:09	AIS
MARMARA FOR ORDERS	2 Jan 2024 18:00	2 Jan 2024 13:09	AIS
Novorossiysk	12 Nov 2023 00:00	14 Nov 2023 00:00 🌗	Fixture
BLACK	10 Nov 2023 23:00	11 Nov 2023 04:09 🌗	AIS
BLACK SEA FOR ORDERS	10 Nov 2023 23:00	8 Nov 2023 14:09	AIS
Novorossiysk	8 Nov 2023 00:00	3 Nov 2023 00:00	Fixture
NOVOROSSIYSK	10 Nov 2023 00:00	2 Nov 2023 00:00	Market

Place of actual loading



Place of the specified loading





S Institute

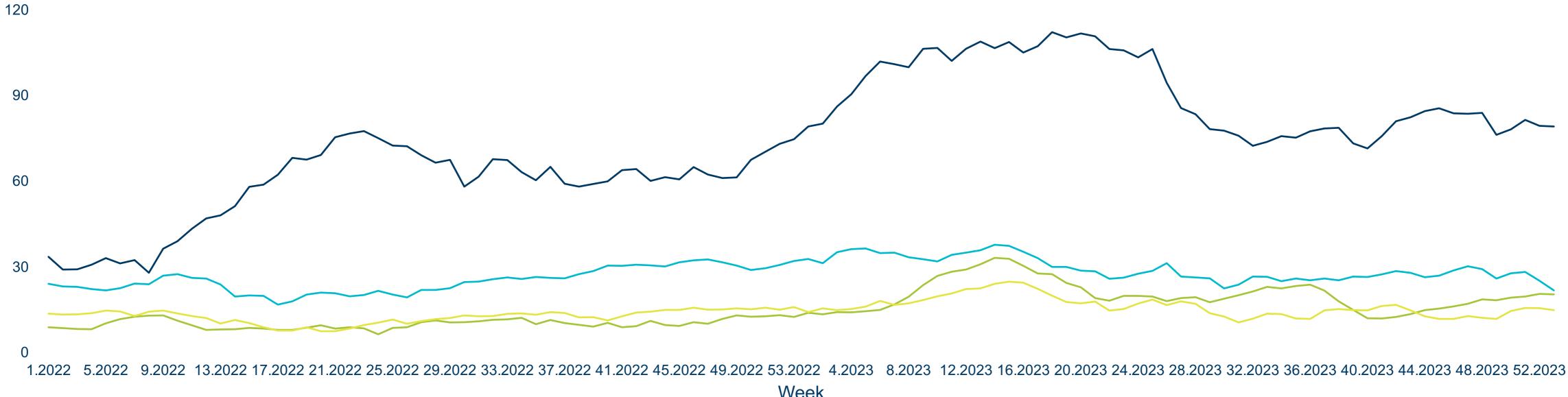
Rerouting of Russian crude and oil products to new destinations increased Russian oil on water by around 65 mb compared to the pre-invasion average

- Rerouting of Russian crude and oil products to new destinations have significantly increased Russian oil on water
- In December 2023, the volume of Russian oil on water was around 65 mb higher than the pre-invasion average
- introduction of oil embargo by the EU, they were around 2.6 and 2.3 times higher respectively compared to January 2022

-Fuel Oils

-Crude/Co

Russian oil on water, mb, average per week



Although the volumes of Russian crude and diesel on water decreased in December compared to their peaks after the

Week

-Gasoline/Naphtha -Gasoil/Diesel

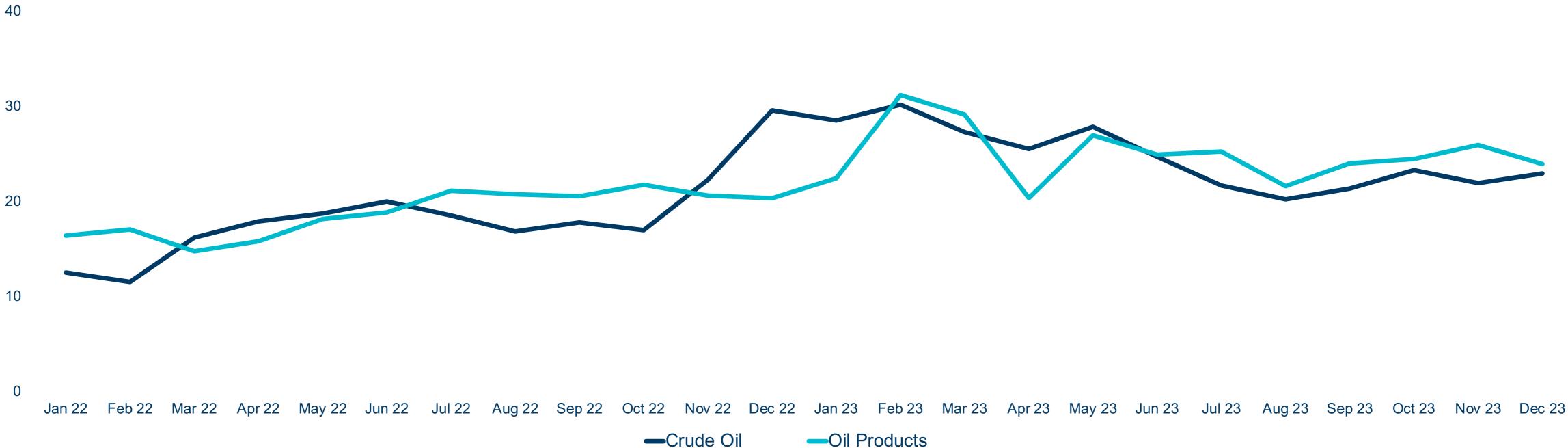




Average transit days of crude and oil products increased by 98% and 40% respectively compared to February 2022

- Rerouting crude oil from Europe to mostly India and China increased the average transit days for crude oil from 12 in February 2022 to 30 in February 2023 but decreased to 23 in December 2023
- The average transit days for oil products increased from 17 in February 2022 to 31 in February 2023 but declined to 24 in December 2023

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



-Oil Products



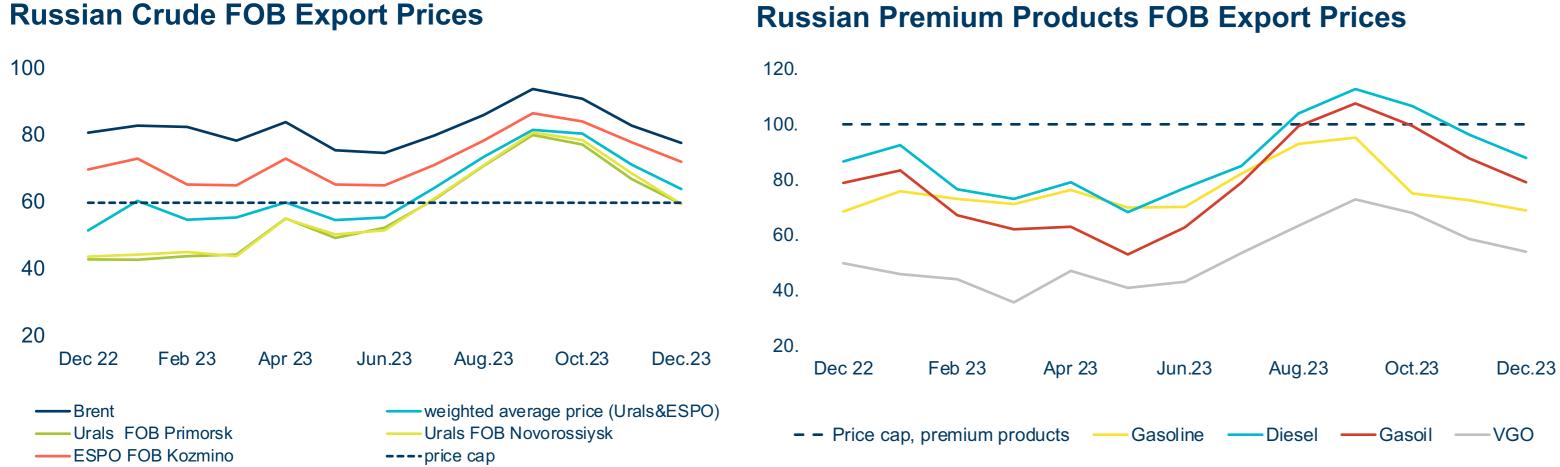




S Institute

In December 2023, Urals FOB Baltic and Black Sea fell by around \$7/bb and \$9/bb respectively while ESPO FOB decreased by around \$6/bbl

- In December 2023, Urals FOB Baltic and Black Sea decreased by 7.4/bbl and 9.2/bbl to \$59.6/bbl and \$59.7/bbl respectively.
- discount to Dated Brent widened by just \$0.7/bbl MoM
- decreased by \$4.6/bbl to \$54.0/bbl MoM in December
- cap for discounted products at \$45/bbl



Source: IEA (2023), Oil Market Report - December 2023, IEA, Paris, WB Commodity Prices (Brent)

The discount on Urals FOB Baltic and Black Sea has widened by around \$2/bbl and \$4/bbl respectively in December MoM due to expansion of the US Treasury investigation into ships, their owners and related traders that have transported Russian oil purchased above the EU/G7 price cap

ESPO FOB decreased by \$5.9/bbl to \$72.2/bbl remaining ineligible for Western maritime service as since the embargo introduction while the

Prices for Russian diesel decreased to \$87.8/bbl to around \$12.2/bbl below price cap. The price of gasoline declined by \$3.6/bb to \$69.0/bbl while gasoil decreased by \$8.7/bbl to \$79.1/bbl MoM. The price of VGO which had to be placed to discounted products instead of the premium ones

Price for fuel oil decreased by \$5.2/bbl to around \$38.3/bbl while price for naphtha decreased by \$0.9/bbl to \$48.4/bbl exceeding the approved price

Russian Discounted Products FOB Export Prices



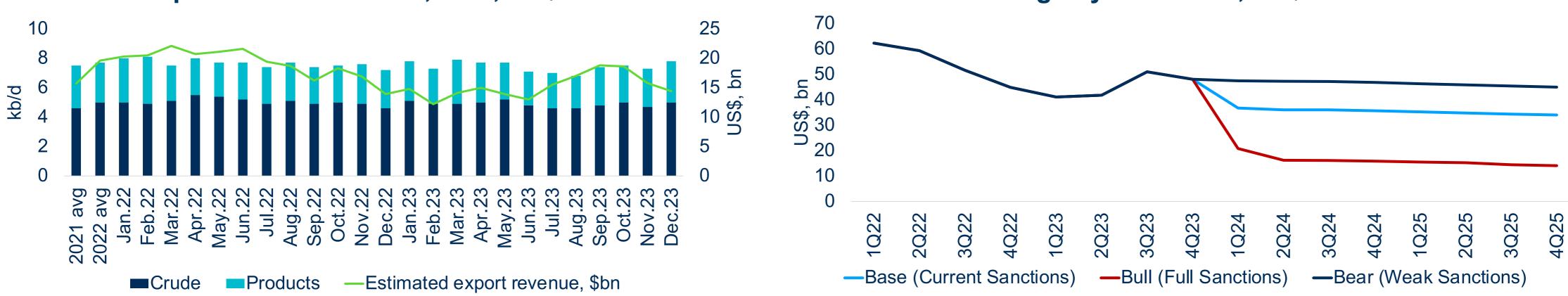


Institute KSE

In December 2023 Russian oil export revenues declined by \$1.4 bn to \$14.4 bn, the lowest level since June 2023. KSE Institute projects that revenues will contract to still robust \$145 bn and \$139 bn in 2024 and 2025 respectively in the base case scenario from \$218 bn in 2022 and estimated \$183 bn in 2023, but the scenario outcome is sensitive to sanctions enforcement

- market prices led to a surge of Russian oil revenues until November when the trend has been reversed for both
- prices and wider discount on Urals
- Russian oil exports goes down to 7.0 mb/d.
- Total Russian oil exports goes down to 5.2 mb/d in this scenario.
- and 2025 respectively. Total Russian oil exports only goes down to to 7.4 mb/d in this scenario.

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



Source: IEA Oil Market Reports, KSE Institute estimates

Although volumes of Russian oil exports marginally changed since the invasion as it was able to redirect exports to other markets proposing steep discounts, the decline in the world oil prices and steep discount on Russian oil resulted in a sharp fall in Russian oil revenues in 1H2023. Narrowing the discount on Russian oil and soaring world

Despite higher both crude and products shipments in December, Russian oil export revenues decreased by \$1.4 bn (MOM) to \$14.4 bn in December due to lower world

The KSE Institute keeps its forecast for Russian oil revenues unchanged. In the base case with current oil price caps and status quo of sanctions but their stronger enforcement, revenues will contract to \$145 bn and \$139 bn in 2024 and 2025 respectively compared to \$218 bn and estimated \$183 bn in 2023 respectively. Total

• In the bull sanctions case, with lower price cap equivalent to \$50/bbl discount to forecast Brent prices, revenues fall to \$69 bn and \$59 bn in 2024 and 2025 respectively.

• In the bear case, with US\$ 10/bbl discount to forecast Brent prices, and less decline in oil export volumes, revenues will increase to robust \$189 bn and \$183 bn in 2024

Russian Oil Earnings by Scenarios, US\$ bn





Policy Recommendations

Bold measures are needed as Russia's oil is slipping beyond G7 reach.

The October-November data suggest that problems with price cap implementation and enforcement are much bigger than previously expected. To ensure that sanctions continue to constrain Russia's ability to wage its war of aggression on Ukraine—and that their credibility is maintained—additional steps urgently need to be taken. Below, we outline three critical measures that can quickly and effectively address Russian effort to evade sanctions on its oil exports.

- current system (including original sales contracts, etc.).
- verification of insurance information should be established.
- financial system for internationally operating businesses.

1. G7/EU countries should ensure that their authorities have sufficient proof of compliance with the price cap, including by: a) leveraging the involvement of G7/EU financial institutions in the Russian oil trade and their knowledge of key transaction details such as prices; b) requiring attestations to be provided by reputable entities defined via transparent criteria and subject to sanctions in the case of violations or their facilitation; and/or c) stepping-up of documentary evidence requirements for G7/EU service providers under the

2. EU coastal states should leverage geographical "choke points" to limit Russia's use of a "shadow fleet" of tankers by requiring proper spill insurance for vessels' passage through their territorial waters, including in the Baltic Sea and Mediterranean. This would force Russia to rely once again on G7/EU services for a substantial share of its exports and also help address environmental risks that have emerged due to the increasing use of old and under-insured tankers. For this purpose, a system to allow for timely and efficient

3. Price cap coalition countries should step up penalties on entities that violate the price cap. For G7/EU companies, this should include tougher monetary penalties and expanded lockout periods. For third-country actors, price cap coalition countries should impose "direct" sanctions (e.g., SDN listing in the United States or use of the European Union's anti-circumvention tool established in the 11th package) and consider the application of extraterritorial ("secondary") sanctions, leveraging the continued critical importance of its











¹ Please see for analysis and detailed recommendation: The International Group of Working Sanctions, September 4, 2023, Using Energy Sanctions to Shorten the War, Working Paper #14, https://fsi9-prod.s3.us-west-1.amazonaws.com/s3fs-public/2023-