Pressuring Russia to Peace with a Maritime Services Ban

Prepared by the KSE Institute Sanctions Hub of Excellence, February 2026

The debate surrounding an EU or G7+ maritime services ban (MSB) on Russian oil has recently gained momentum as a means to reduce Russia's oil revenues and, thus, force it to negotiate in earnest. Previously, the bloc opted for the oil price cap (OPC) to avoid increasing global oil prices. However, with the oil market expected to be oversupplied and the OPC less effective than hoped, a more aggressive, volume-based sanctions approach is being reconsidered. This document analyzes the potential impact, side effects, and implementation challenges of a maritime services ban. It presents three scenarios of varying enforcement efficacies, finding that even moderately effective enforcement of an MSB would reduce Russian oil export earnings by $46 bn over the first one-and-a-half years. It also emphasizes that an MSB must be paired with a stepped-up campaign to rein in the shadow fleet.

Russia's full-scale war on Ukraine is about to enter its fifth year, with the Kremlin continuing to stick to maximalist demands while conducting escalating strikes on Ukrainian civilians and critical energy infrastructure. Its brutality, incremental and costly advances on the battlefield, and confidence at the negotiating table, however, mask **fundamental weaknesses in the Russian economy that can be exploited**.

Russia is a petrostate, where oil and gas continue to account for more than half of exports and 20–25% of federal budget revenues. When oil prices are high, as they had been until recently, Russia benefits from favorable external conditions, its budget feels little pressure—despite soaring war expenditures—and the country is well-placed to handle simultaneous shocks. But when oil prices are low, as they are now and will likely remain for some time, Russia is weak and prone to banking, currency, budget, and broad economic crises. Its economy has already stagnated and shows no prospects for recovery in the coming years.

For the first time since the full-scale invasion, global oil prices have now been at a moderate level for an extended period. Moreover, the **global oil market is well-supplied**, with inventories building and prices widely expected to fall further once geopolitical tensions subside. In the past, Russia has been in a **precarious state** whenever oil export earnings have fallen on a sustained basis below ~$10 bn a month (~$120 bn a year), and budget oil and gas revenues have fallen below ~$6 bn a month (~$70 bn a year). Export earnings are currently approaching this threshold ($11 bn and $11.1 bn in December and January), while budget revenues are already below it ($5.1 bn in January)—putting the Russian economy and its budget in the danger zone.

The **cumulative effect of sanctions has been significant**, putting most Russian reserves beyond use, reducing oil revenues by driving a wide discount on Russian oil prices, and progressively closing the European market to Russia. This impact has been recently reinforced by US sanctions on Lukoil and Rosneft and a potential Indian agreement to reduce purchases of Russian oil as part of a trade deal with the US. As a result, Russian oil export earnings and budget revenues have been under serious pressure lately.

However, the **flagship sanction measure** designed to squeeze Russian oil revenues—the **oil price cap**, which required any cargo of Russian oil which used Western maritime services to be priced below a certain level (initially $60/bbl, now $44.1/bbl for crude)—**has not been a success**. It briefly widened the discount for Russian oil in early 2023, and proponents argued it avoided a more pronounced supply shock by keeping Russian oil flowing in a tight market. But in practice, in the absence of effective enforcement, it proved easy to game the system by providing falsified pricing information. For premium oil products—around 15% of Russian oil exports—the cap was just set too high. Russia's oil revenues kept flowing and continued to finance the war.

The grim fourth anniversary of Russia's invasion offers an opportunity to put this right, and **pressure Russia to peace**. For the EU's 20th package, we support the Commission's proposal to **replace the oil price cap** with a

tougher and simpler measure, which can be easily enforced: a **maritime services ban** on EU companies providing any services to ship Russian oil. However, we believe that it should apply to all Russian oil exports and not only crude oil, as currently proposed. In addition, the measure should also be adopted by other OPC coalition countries. In our base case, this measure will **reduce Russian oil export volumes** by 1.4 mb/d in H2 2026 (-18% vs. 2025) and by 0.8 mb/d in 2027 (-11%), while also **driving a deeper discount on Russian oil** and forcing Russia to spend even more on shipping. An MSB that is moderately effective would **cost Russia cumulative $46 bn in oil export earnings** over one-and-a-half years and **reduce oil and gas budget revenues by $23 bn**. As both exports and budget revenues are already under pressure due to low global oil prices and US sanctions on Russian oil majors, this would seriously undermine the economy and budget.

Importantly, a **maritime services ban must be paired with a stepped-up campaign to rein in the shadow fleet** as Russia would otherwise simply replace mainstream fleet capacity with additional shadow tankers. This requires **continuing the listing of vessels across G7+ jurisdictions and targeting the ecosystem of actors in non-coalition countries that facilitate the continued activities of designated ships**. In addition, coalition coastal states should stop shadow vessels that are operating in violation of international maritime law, i.e., that do not have a valid flag. Such instances have become more frequent in recent months.

What Is a Maritime Services Ban and Why Is It Being Proposed Now?

When the sanctions coalition debated how best to use its leverage[1] to reduce Russia's oil revenues in 2022, it ultimately opted for an **oil price cap** (OPC) due to fears that a more aggressive measure might send global oil prices skyrocketing. The oil market was tight at the time—the benchmark Brent crude price had spent much of the year at or above $100/bbl—and Western politicians, particularly in the Biden administration, feared political backlash from voters already anxious about inflation. The OPC was a **novel approach that sought to limit Russian oil revenues without reducing the volume of oil supplied to the global market**.

It prohibited the provision of services to exports of Russian oil occurring above a certain price. In combination with European measures to end or reduce Russian oil imports, the price cap (originally set at $60/bbl for crude and $45/bbl or $100/bbl for oil products) was briefly successful at driving up the discount on Russian oil. But **enforcement challenges** have plagued the OPC from the start, and the cap was set too high for oil products.

The option tabled in favor of the OPC in 2022—a full maritime services ban—has resurfaced in 2025–26 as a politically viable approach to reducing Russian oil revenues. A **maritime services ban would**, as the name suggests, **prohibit the provision of all services**[2] **connected with the seaborne export of Russian oil**. The European Commission has proposed to include such a ban in the EU's 20th sanctions package, which is expected to be adopted in time for the 4th anniversary of the full-scale invasion of Ukraine (February 24, 2026).

While Russia has built alternative export capacities that do not rely on G7+ services—the "shadow fleet"—to circumvent the OPC, **G7+ service providers continue to play a role** for Russia's seaborne oil exports. A maritime services ban would prohibit their provision for the purposes of Russian oil exports altogether, regardless of price. Over the first ten months of 2025, Russia relied on mainstream fleet vessels vulnerable to a MSB—those owned, managed, flagged, or insured in G7+ countries—for the transport of 0.85 mb/d of crude oil and 1.71 mb/d of oil products. The potential leverage of a maritime services ban would be biggest for Baltic Sea ports, where the mainstream fleet carried 1.67 mb/d of Russian oil (crude and products) over this time period, and Black Sea ports, where the corresponding number was 0.79 mb/d (see Annex 1).

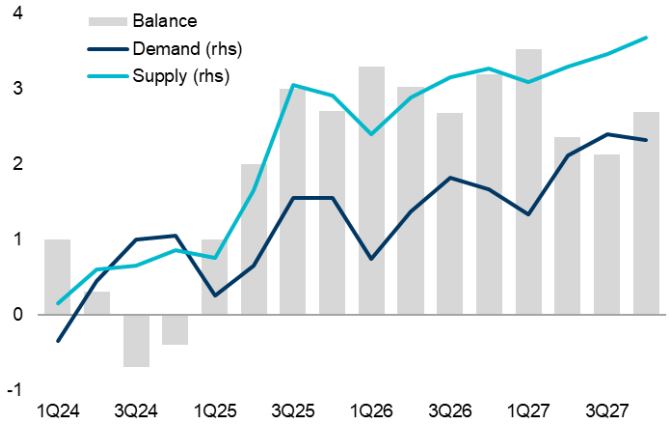
[1] The sanctions coalition, despite its lack of any OPEC+ member, enjoys disproportionate influence over global flows of oil shipments thanks primarily to its jurisdiction over the International Group of P&I Clubs (IG), a non-commercial consortium that provides third-party liability insurance for oil tanker ecosystems. Before 2022, the overwhelming majority (~95%) of the global oil tanker fleet carried IG P&I insurance. Between P&I insurance, ownership of vessels, and other operational services (e.g., management), the sanctions coalition has considerable leverage over seaborne oil export dynamics.

[2] The services included in a maritime services ban would be the same services specified in the oil price cap regime: ownership, management, flagging, insurance, and brokering. See OFAC guidance on the OPC here.

In contrast to 2022, **a supply shock now looks unlikely**. In January 2026, the IEA forecast a 3.3 mb/d and 3.0 mb/d global oil surplus in Q1 and Q2 2026, respectively (see Figure 1). This exceeds the volume plausibly reduced by a services ban, which could cut Russian oil supply by 2.1 mb/d and 1.8 mb/d in H2 2026 and 2027, respectively, in case of very effective MSB enforcement. The global oil market is expected to remain in surplus through 2026, and Brent futures trade well below the prices seen during the post-2022 tight market. Prices are currently somewhat elevated due to tensions between the US and Iran, but market fundamentals are expected to bring Brent prices back to the mid-$50s/bbl for most of 2026 and 2027 (see Figure 2).

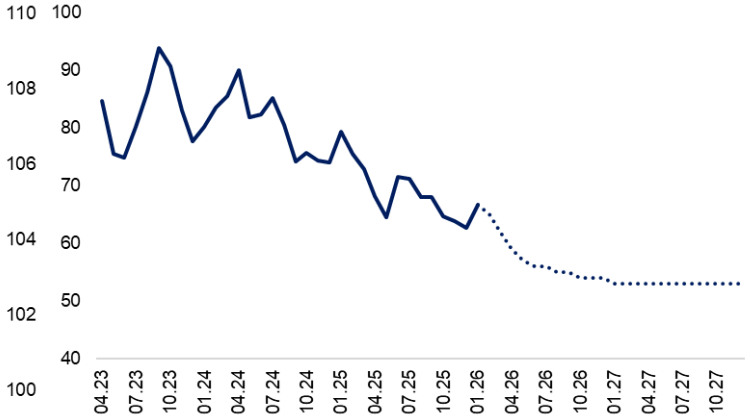
The surplus projected by the IEA would exceed the combination of maximum MSB impact (2.3 mb/d) *and* a complete block on Iranian export volumes of around 1.5 mb/d. A reduction of Russian volumes would offset pressure for prices to decline further below $60/bbl due to the supply glut, however, which would be beneficial for other producers, including US shale ones. Even in a scenario where additional volumes were removed from the market, two factors can ease concerns: OPEC+ would be able to put more barrels back on the market, while US shale producers could review their plans to cut production in case WTI prices remain around $60/bbl.

Figure 1: World oil balance in 2024–26, mb/d



Source: EIA, IEA, KSE Institute

Figure 2: Brent historical prices and futures $/bbl



Source: EIA, IEA, KSE Institute

What Impact Would a Comprehensive Maritime Services Ban Have?

Rather than targeting the price, **a comprehensive MSB would seek to reduce the volume of Russia oil exports**. With a *comprehensive* ban, we mean that the measure would be imposed by all G7+ jurisdictions currently part of the price cap coalition, including the European Union, United Kingdom, and United States. While the target (and primary effect) will be export volumes, Russia's export prices would also take a hit under an MSB as buyers demand steeper discounts to compensate for increased sanctions risk.

The effect of an MSB will ultimately depend on Russia's **ability to shift volumes currently shipped by the mainstream fleet to the shadow fleet**. This is largely a question of enforcement, which is explored in greater detail below. Currently, Russia employs both a mainstream fleet and a shadow fleet; the former transports ~25% of seaborne crude exports and ~75% of seaborne oil products exports (both averages for 2025), with the remainder transported by shadow vessels. Once an MSB is imposed, Russia will have to completely switch to tankers that do not rely upon G7+ services, effectively moving all of its seaborne exports to the shadow fleet.

Impact on Export Volumes and Prices

A services ban would **reduce the volume of Russian oil exports**. We develop **three scenarios** that differ by the effectiveness of the maritime services ban's enforcement, with Russia facing varying levels of difficulty in moving white fleet volumes to the shadow fleet. In our ***baseline scenario***, we assume that half of the crude

and product volumes currently shipped by the mainstream fleet will be moved to the shadow fleet, while the other half is removed from the market. In the ***bull scenario***, Russia is unable to find tankers to ship any volumes currently transported by the mainstream fleet, while the ***bear scenario*** assumes that two-thirds of the volume is moved to the shadow fleet. In all scenarios, we assume that the MSB takes effect in Q3 2026. Table 1 summarizes the assumptions and primary effects of the counterfactual and MSB scenarios.

Table 1: Summary of scenarios and outcomes

Counterfactual	Volumes decline marginally from Q4 2025 to Q1 2026 due to sanctions on Rosneft and Lukoil before recovering in Q2–Q3 2026. Prices decline more significantly, driven primarily by lower global oil prices and to a lesser extent sanctions (i.e., a wider discount on Russian oil prices), but stabilize in the low-to-mid $40s/bbl in Q1 2026–Q4 2027 for crude, and the mid $40s/bbl for products. *Oil export earnings drop from $160 bn in 2025 to $115 bn in 2026 and $121 bn in 2027. Budget revenues from oil and gas decline from $101 bn in 2025 to $75 bn in 2026 and $77 bn in 2027. Existing external and fiscal vulnerabilities are clearly exacerbated.*
Baseline MSB scenario	**Half** of the oil volumes currently shipped by the mainstream fleet are moved to the shadow fleet, while the other half is removed from the market. Prices stabilize in the $39–41/bbl range for crude and the low-to-mid $30s for products as global prices moderate and discounts gradually narrow. *Oil export earnings drop by an additional $17 bn in 2026 and $29 bn in 2027 vs. the counterfactual. Budget revenues decline by an additional $8 bn in 2026 and $15 bn in 2027. MSB significantly increases pressure on the Russian economy and budget.*
Bull MSB scenario	**No** mainstream fleet volume is successfully moved to the shadow fleet. Product prices plummet to ~$20/bbl for products beginning in Q4 2026, while crude prices reach the lower $30s/bb. This scenario serves as an upper bound. *Oil export earnings drop by an additional $28 bn in 2026 and $62 bn in 2027 vs. the counterfactual. Budget revenues decline by an additional $14 bn in 2026 and $32bn in 2027. MSB pushes the Russian economy and budget squarely into crisis territory.*
Bear MSB scenario	**Two-thirds** of the mainstream fleet's volumes are moved to the shadow fleet, while the remainder is removed. Crude prices remain nearly in lockstep with the counterfactual, while oil product prices lag the counterfactual by ~$2/bbl. *Oil export earnings drop by an additional $6 bn in 2026 and $7 bn in 2027 vs. the counterfactual. Budget revenues decline by an additional $3 bn in 2026 and $4 bn in 2027. MSB largely fails to increase pressure on Russia further.*

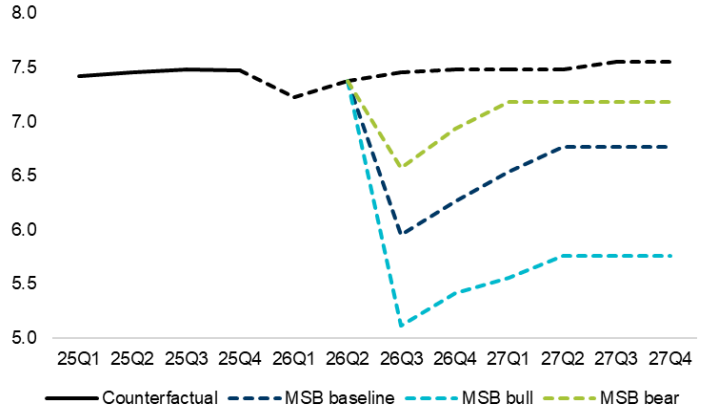
This exercise is complicated by **uncertainty surrounding the non-MSB (*counterfactual*) scenario** stemming from recent US sanctions on Rosneft and Lukoil. While these measures have sharply widened the discount on Russian oil and may constrain volumes, their effect could dissipate—with the exact timeline dependent on the strength of enforcement—whereas lower export volumes could reduce the potential leverage of an MSB since less capacity is needed. At the same time, a deal reportedly reached between Donald Trump and Indian prime minister Modi related to imports of Russian oil could put further downward pressure on export volumes and prices. For this analysis, we assume that volumes will decline in the counterfactual scenario from 7.5 mb/d in Q4 2025 to 7.2 mb/d in Q1 2026 before recovering already in Q2 2026 (see Figure 3).

We also note that Indian and Turkish imports of Russian crude have both declined in response to the EU's ban on oil products processed from Russian oil, reducing volumes in 2026 despite an uptick in demand from China. However, in the *counterfactual*, we conservatively assume that Russia will manage to circumvent sanctions on its oil majors by establishing intermediaries to shield third-country actors from US secondary sanctions.

The *baseline scenario*, where half of white fleet volumes are transferred to the shadow fleet, represents moderately successful implementation of the services ban, reducing export volumes by 0.7 mb/d in 2026 and 0.8 mb/d in 2027 compared to the counterfactual. The *bull scenario*, on the other hand, is effectively an upper bound estimate, as it assumes that Russia is unable to move any export volumes to the shadow fleet, reducing export volumes by 1.1 mb/d in 2026 and 1.8 mb/d in 2027. This low probability scenario further assumes i) enforcement on the shadow fleet and its customers—including those who purchase oil from tankers that carry Russian oil after ship-to-ship transfers; ii) sanctions on the remaining oil majors (e.g., Rusneft, Tatneft) from the US, EU, and UK authorities: iii) that Chinese state companies scale back their Russian oil purchases, so total seaborne ESPO exports decline by 20%. Finally, the *bear scenario* represents ineffective enforcement, wherein Russia is able to acquire new shadow fleet tankers on the market relatively unimpeded.

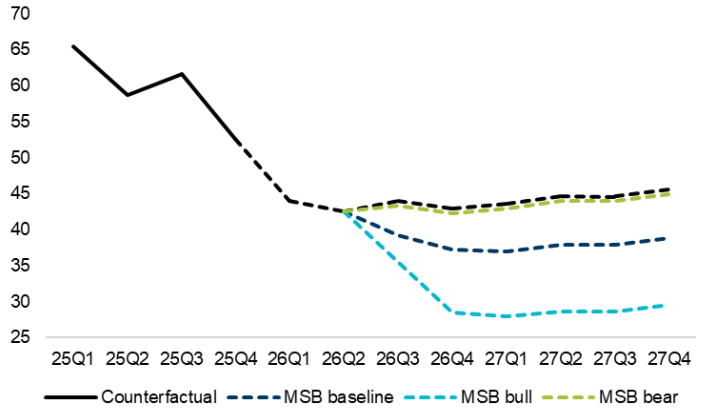
With regard to export prices in the *counterfactual,* we assume that **global crude oil prices will return to the mid-$50s/bbl** in the coming weeks as geopolitical tensions subside and market fundamentals take over again. Together with discounts on Urals and ESPO expected to decline somewhat in the coming quarters as Russia continues to find ways to evade US sanctions on Rosneft and Lukoil, as well as markedly weaker oil product prices, this means that Russian oil export prices will be in the mid-$40s/bbl for the foreseeable future (see Figure 4). While prices would not change meaningfully in the *bear scenario*, they would come under additional pressure in the *baseline scenario* and drop below $30/bbl in the *bull scenario* (see also Annex 2).

Figure 3: Oil export volume scenarios, mb/d



Source: IEA, KSE Institute

Figure 4: Oil export prices, $/bbl*



*Source: IEA, KSE Institute *crude and products*

Impact on Export Earnings

Export earnings are a function of volume and price dynamics. Thanks to lower global prices and US sanctions on Rosneft and Lukoil, **oil export earnings are projected to fall sharply even in the counterfactual**—from $160 bn in 2025 to $115 bn in 2026 and $121 bn in 2027. A **comprehensive MSB has the potential to significantly reduce earnings further**. In the *baseline scenario*, they would decline by $16.5 bn vs. the counterfactual in 2026 and by $29.3 bn in 2027. At $99 bn and $92 bn, respectively, this would already be a critically low level.[3] Stricter MSB enforcement could exacerbate the problems dramatically, however. In the *bull scenario*, we expect that oil export earnings would fall to $87 bn in 2026 and $59 bn in 2027. In the *bear*

[3] For a regular assessment of the state of the Russian economy and budget, see here.

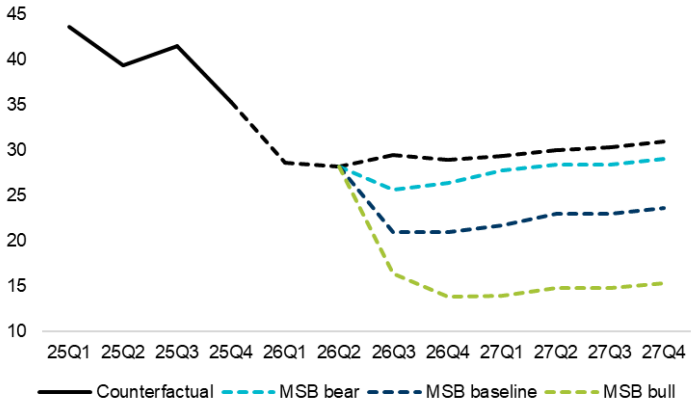
scenario, exports would still be markedly lower than in 2025—at $109 bn and $114 bn in 2026 and 2027, respectively—but effects would be manageable for Russia. For more information, see Table 2 and Figure 5.

Table 2: Oil exports earnings, $ bn

	2025	2026	2027
Counterfactual (non-MSB scenario)	160.0	115.3	120.8
MSB baseline (vs. counterfactual)		98.8 (-16.5)	91.5 (-29.3)
MSB bull (vs. counterfactual)		87.1 (-28.2)	59.0 (-61.8)
MSB bear (vs. counterfactual)		108.9 (-6.4)	113.6 (-7.2)

Source: IEA, KSE Institute

Figure 5: Oil exports earnings, $ bn



Source: IEA, KSE Institute

Impact on Budget Revenues

While Russia generates most of its oil and gas budget revenues from taxing production, in particular that of crude oil, **lower exports would have a direct impact on revenues** as production volumes would quickly follow the dynamics of exports due to the absence of significant storage capacity. To produce a rough estimate of an MSB's impact on budget revenues, we assume that the government would receive a proportion of export earnings similar to that of the recent past. In 2025, oil and gas budget revenues amounted to the equivalent of $101 bn or 51% of oil and gas export earnings. This is similar to 2024 and close to the 2010–25 average of 53%, although the share has fluctuated between 44% in 2023 and 60% in 2012. Fundamentally, higher oil prices tend to be associated with budget revenues accounting for a higher share of oil export earnings.

Based on this approach, we estimate that **budget revenues will decline to $75–76 bn** (-25–26% vs. 2025) each in 2026–27 in the *counterfactual* due to subdued global oil prices, the wider discount stemming from the Rosneft-Lukoil sanctions, and lower export volumes. An **MSB could significantly exacerbate budget challenges**. In the *baseline scenario*, revenues would be an additional $8 bn lower in 2026 and $15 bn lower in 2027. In the *bull scenario*, the changes would be -$14 bn and -$32 bn in 2026–27, respectively, compared to the counterfactual, while they would be only -$3 bn and -$4 bn in the *bear scenario*. For more information, see Table 3 and Figure 6. Even in the latter case, though, budget revenues would be at a level typically associated with macroeconomic instability in Russia. Past experience suggests budgetary (and currency) trouble whenever oil and gas tax revenues fall below $6 bn per month on a sustained basis—or ~$70 bn for a full year.

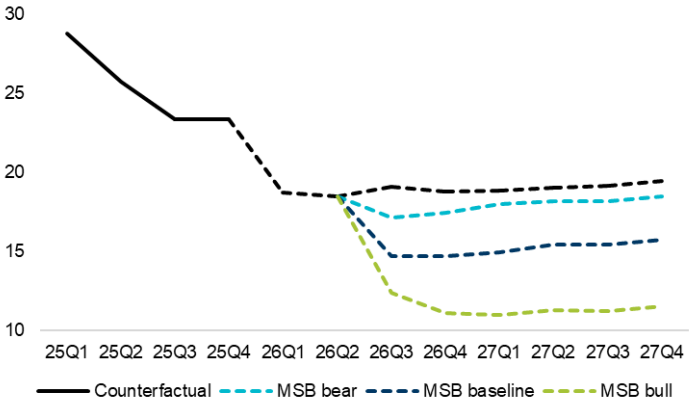
These numbers also likely **underestimate the full impact of a maritime services ban** on the federal budget as they are based on a relatively narrow definition of oil and gas revenues, including only extraction taxes, export duties, and the additional profit tax. However, there are other revenue categories that are influenced by the oil and gas sector, e.g., taxes and social contributions paid by workers or taxes paid by sectors dependent on fossil fuels, such as petrochemicals, fertilizers, and energy-intensive industries. Of course, the government could increase the share of export earnings going to the budget towards 55%, thereby generating an additional $5–6 bn in revenues per year depending on the scenario. However, this would, in turn, reduce oil and gas companies' profits and, thus, could affect broader revenue collection related to the sector.

Table 3: Oil and gas budget revenues, $ bn

	2025	2026	2027
Counterfactual (non-MSB scenario)	101.0	75.1	76.5
MSB baseline (vs. counterfactual)		66.7 (-8.4)	61.6 (-14.9)
MSB bull (vs. counterfactual)		60.7 (-14.4)	45.1 (-31.5)
MSB bear (vs. counterfactual)		71.8 (-3.3)	72.9 (-3.7)

Source: CBR, MinFin, KSE Institute

Figure 6: Oil and gas budget revenues, $ bn



Source: CBR, MinFin, KSE Institute

Shadow Fleet Replacement Costs

To avoid a drop in revenues from lower export volumes, Russia would incur **significant costs to compensate for the lost mainstream fleet capacity** with additional shadow tankers. In the case of a full maritime services ban, Russia would need to add 64 crude oil tankers and 440 oil product ones to the shadow fleet. We estimate that the acquisition of mainstream tankers currently owned by G7+ entities and the replacement of other involved G7+ services—management, flagging, insurance—would cost up to ~$10 bn. However, it is more likely that Russia would employ non-G7+ ships currently involved with non-Russian cargoes to replace the mainstream fleet, while G7+ ships would take over those routes in Asia and the Middle East. In this case, the cost would only consist of an annual freight premium of ~$1 bn. See Annex 3 for methodology and scenarios.

What Needs to Be Considered When Implementing a Services Ban?

Incentive to Grow the Shadow Fleet

A maritime services ban on Russian oil will inevitably **incentivize Russia to expand its shadow fleet**, thus paving the way for more old and unreliably insured ships to pass through the Baltic, Black, and North Seas. Therefore, an MSB **should be accompanied by enforcement and expansion of the shadow fleet designation campaign**. While EU and UK vessel listings have reduced their activities, many remain operational and third-country actors are not sufficiently incentivized to stop engaging with the ships or their cargo due to the absence of a threat of secondary sanctions. US listings remain extremely effective—for exactly this reason—but no vessels have been designated in the Russia context since January 2025. Efforts to **target the ecosystem** are key to reining in the shadow fleet. This should include all involved actors: owners, managers, flag states, insurance companies, traders, port authorities, buyers of the oil, and banks.

Alignment within the Coalition

Coordination of a maritime services ban within the G7+ will be crucial to enforcement, given that the UK and US still play considerable roles insuring mainstream fleet vessels. Key insurers include *West of England* (UK), *American Club* (US), and *NorthStandard* (UK). See Annex 4 for further details. As recent changes to the OPC have shown, a lack of alignment across jurisdictions undermines enforcement. Here, it could allow for vessels to move to US-based insurance, thereby maintaining high standard coverage while evading the MSB.

Nonetheless, in the case of abstention by the US, an MSB would still represent an improvement on the status quo. We find it unlikely that US P&I insurers for example, would en masse take on the risk of insuring tankers carrying Russian oil; doing so could potentially jeopardize their business operations in other G7+ jurisdictions.

Impact on G7+ Business Interests

In a transition from OPC to maritime services ban, **Greek companies would be affected more than those from any other country**. In terms of registered owners and commercial/ISM managers, Greek companies were responsible for over half of oil volumes shipped by the mainstream fleet in January-October 2025. Malta was the flag state for 14% of oil product volumes. Insurance is led by British (62% of all volumes), American (19% of product, 12% of crude), and Norwegian (12% of product, 22% of crude) firms. See Annex 4 for details.

Fundamentally, we believe that an effectively enforced MSB—i.e., one accompanied by stepped-up efforts against the shadow fleet—would be a positive development for the legitimate shipping industry, as the ever-growing global shadow fleet is a threat to law-abiding operators (not to mention the threat that the shadow fleet poses to the environment). Moreover, it is not a given that Russian oil is of existential importance to G7+ ship owners and managers: they have regularly disengaged from the Russia trade whenever the price was above the OPC and compliance could not be ensured due to the deficiencies of the attestation system.

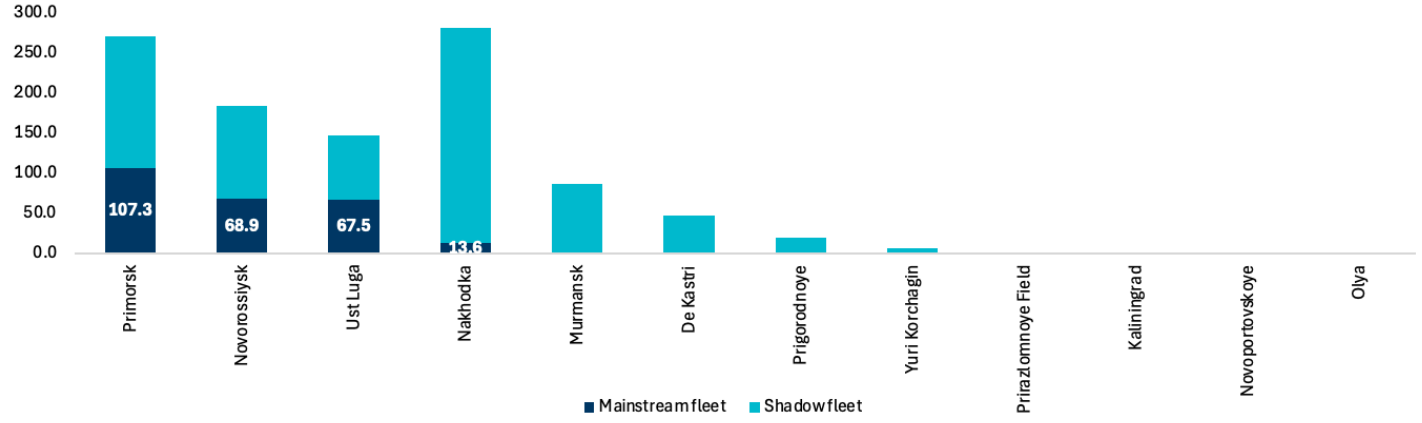
Finally, we **caution against an extended transition period**, which would give G7+ actors time to adjust but also allow Russia to prepare and develop evasion strategies. The MSB should not take effect later than July 1.

Annex 1: Geographical Impact of a Possible Maritime Services Ban

Since Russia's reliance on G7+ services to ship oil differs considerably by geographical regions and ports, a maritime services ban would affect different segments of Russian oil exports to varying degrees, depending on the volume transported with G7+ services. Figures 1.1 and 1.2 display the volume of crude oil and oil product exports potentially affected by an MSB based on average numbers for the first ten months of 2025.

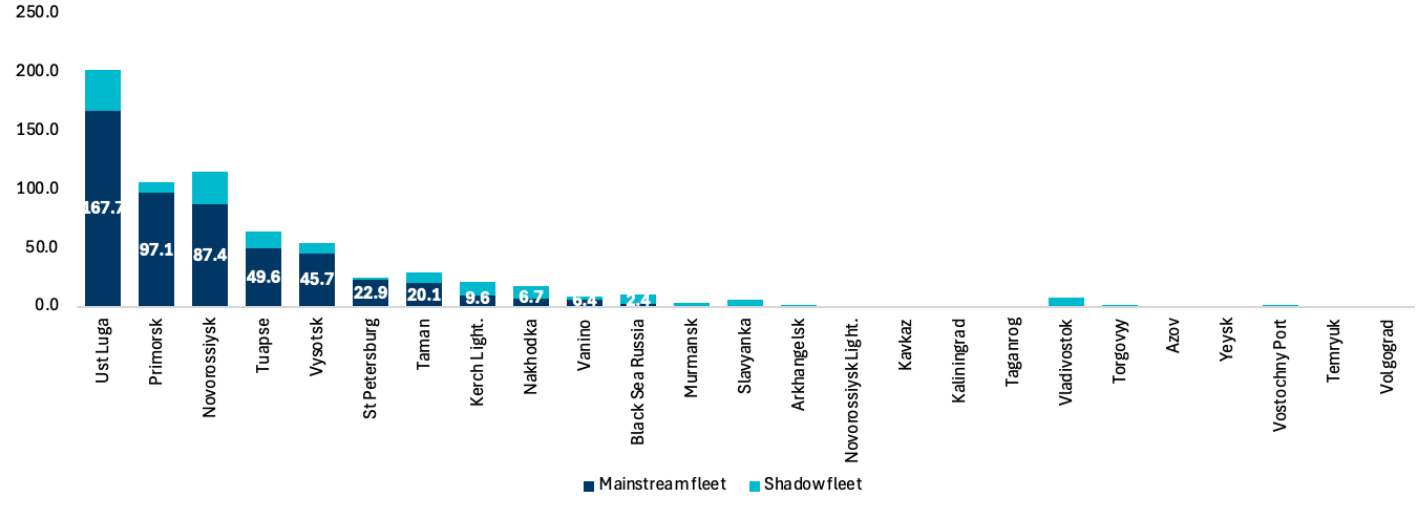
We find that the **impact would be highest for the ports of Primorsk, Novorossisyk, and Ust-Luga as far as crude oil is concerned** due to the continued reliance on G7+-linked ships, while it is small or negligible for Kozmino/Nakhodka and other ports where the shadow fleet's share is almost 100 percent. **For oil products, volumes from a large number of ports would be significantly affected, including Ust-Luga, Novorossiysk, Primorsk, Tuapse, and Vysotsk** due to the lower utilization of shadow tankers. Altogether, **Russian oil exports from Baltic and Black Sea ports are most exposed to a maritime services ban**.

Figure 1.1: Crude oil exports by port in January-October 2025, mb



Source: Equasis, Kpler, P&I clubs, KSE Institute

Figure 1.2: Oil product exports by port in January-October 2025, mb



Source: Equasis, Kpler, P&I clubs, KSE Institute

Annex 2: Maritime Service Ban Scenarios

Table 2.1: Volume of Russian oil exports, mb/d

	25Q1	25Q2	25Q3	25Q4	26Q1	26Q2	26Q3	26Q4	27Q1	27Q2	27Q3	27Q4	2025	2026	2027
Counterfactual	7.4	7.5	7.5	7.5	7.2	7.4	7.5	7.5	7.5	7.5	7.6	7.6	7.5	7.4	7.5
Change to counterfactual due to maritime services ban															
Bear	…	…	…	…	…	…	-0.9	-0.6	-0.3	-0.3	-0.4	-0.4	…	-0.4	-0.3
Baseline	…	…	…	…	…	…	-1.5	-1.2	-0.9	-0.7	-0.8	-0.8	…	-0.7	-0.8
Bull	…	…	…	…	…	…	-2.3	-2.1	-1.9	-1.7	-1.8	-1.8	…	-1.1	-1.8

Table 2.2: Price of Russian crude oil exports, $/bbl

	25Q1	25Q2	25Q3	25Q4	26Q1	26Q2	26Q3	26Q4	27Q1	27Q2	27Q3	27Q4	2025	2026	2027
Counterfactual	63.5	55.8	58.5	49.5	43.5	42.2	43.2	42.2	42.9	43.9	43.8	44.8	56.7	42.8	43.9
Change to counterfactual due to maritime services ban															
Bear	…	…	…	…	…	…	0.0	0.0	0.0	0.0	0.0	0.0	…	0.0	0.0
Baseline	…	…	…	…	…	…	-2.6	-3.3	-4.0	-4.0	-4.0	-4.0	…	-1.4	-4.0
Bull	…	…	…	…	…	…	-4.9	-10.1	-11.1	-11.1	-11.1	-11.1	…	-3.4	-11.1

Table 2.3: Price of Russian oil product exports, $/bbl

	25Q1	25Q2	25Q3	25Q4	26Q1	26Q2	26Q3	26Q4	27Q1	27Q2	27Q3	27Q4	2025	2026	2027
Counterfactual	68.7	64.0	67.5	58.8	45.0	43.0	45.3	44.3	45.0	46.0	46.0	47.0	64.9	44.4	46.0
Change to counterfactual due to maritime services ban															
Bear	…	…	…	…	…	…	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	…	-0.9	-1.8
Baseline	…	…	…	…	…	…	-10.4	-11.4	-12.4	-12.4	-12.4	-12.4	…	-4.3	-12.4
Bull	…	…	…	…	…	…	-18.6	-24.6	-25.6	-25.6	-25.6	-25.6	…	-7.8	-25.6

Table 2.4: Russian oil export earnings, $ bn

	25Q1	25Q2	25Q3	25Q4	26Q1	26Q2	26Q3	26Q4	27Q1	27Q2	27Q3	27Q4	2025	2026	2027
Counterfactual	43.7	39.4	41.5	35.4	28.6	28.2	29.5	28.9	29.4	30.1	30.3	31.0	160.0	115.3	120.8
Change to counterfactual due to maritime services ban															
Bear	…	…	…	…	…	…	-3.8	-2.6	-1.6	-1.7	-1.9	-2.0	…	-6.4	-7.2
Baseline	…	…	…	…	…	…	-8.5	-7.9	-7.6	-7.0	-7.3	-7.4	…	-16.5	-29.3
Bull	…	…	…	…	…	…	-13.1	-15.1	-15.4	-15.2	-15.5	-15.7	…	-28.2	-61.8

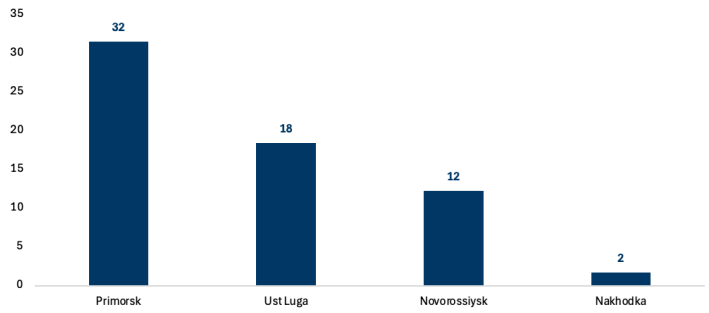
Table 2.5: Russian oil and gas budget revenues, $ bn

	25Q1	25Q2	25Q3	25Q4	26Q1	26Q2	26Q3	26Q4	27Q1	27Q2	27Q3	27Q4	2025	2026	2027
Counterfactual	28.8	25.8	23.4	23.4	18.7	18.5	19.1	18.8	18.8	19.0	19.1	19.5	101.3	75.1	76.5
Change to counterfactual due to maritime services ban															
Bear	…	…	…	…	…	…	-2.0	-1.3	-0.8	-0.9	-1.0	-1.0	…	-3.3	-3.7
Baseline	…	…	…	…	…	…	-4.3	-4.0	-3.9	-3.6	-3.7	-3.7	…	-8.4	-14.9
Bull	…	…	…	…	…	…	-6.7	-7.7	-7.9	-7.8	-7.9	-8.0	…	-14.4	-31.5

Annex 3: Vessel Replacement Needs and Costs

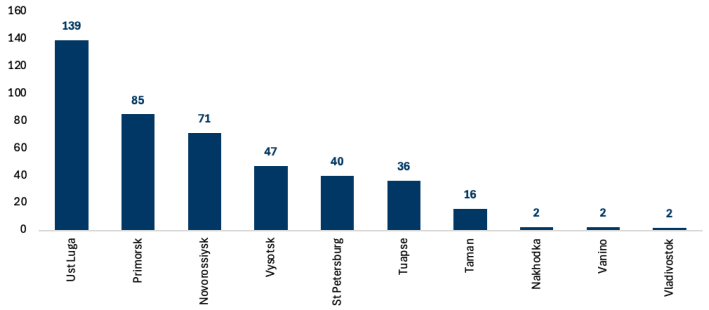
While potentially affected volumes are important for the assessment of the services ban's impact on the global oil market, an additional step is required to **estimate what it would take for Russia to compensate for the lost capacity**. The number of ships needed to transport a certain volume of oil differs considerably depending on the length of voyages from origin ports as well as the average vessel size used. To estimate the vessel needs, we divide the monthly export volume currently transported from a certain port with the involvement of G7+ services by the average vessel capacity to yield the **required number of departures**. Next, we calculate how many unique vessels are needed for such operations by adjusting for the average length of roundtrip voyages from the port in question. Figures 3.1 and 3.1 display the resulting **tanker needs**, showing that a larger number of vessels is required to compensate for lost capacities at Baltic and Black Sea ports due to the significantly longer voyages. Table 3.1 summarizes the information used for these calculations and the results.

Figure 3.1: Tanker replacement needs for crude oil



Source: KSE Institute

Figure 3.2: Tanker replacement needs for oil prod.



Source: KSE Institute

Table 3.1: Calculation of tanker needs by port

	Avg. monthly export volume (bbl)	Avg. vessel capacity (bbl)	Required number of voyages per month	Avg. length of voyage in days	Required number of unique vessels
Crude oil					
Primorsk	10,730,000	711,000	15.1	31.3	32
Novorossiysk	6,886,000	810,000	8.5	21.6	12
Ust-Luga	6,746,000	767,000	8.8	31.4	18
Kozmino/Nakhodka	1,365,000	718,000	1.9	13.8	2
Oil products					
Ust-Luga	16,770,000	348,000	48.2	43.4	139
Primorsk	9,711,000	217,000	44.7	28.5	85
Novorossiysk	8,736,000	169,000	51.8	20.6	71
Tuapse	4,956,332	192,106	25.8	21.2	36
Vysotsk	4,574,830	248,632	18.4	38.4	47
Taman	2,011,328	228,560	8.8	26.9	16
St. Petersburg	2,288,785	163,485	14	42.6	40
Kozmino/Nakhodka	674,354	224,785	3	11.6	2
Vanino	640,879	183,108	3.5	9.7	2
Vladivostok	56,121	33,673	1.7	18	2

The **cost of vessel replacement** will depend on how successful Russia is at reallocating existing shadow tankers already operating on other routes and converting vessels from the mainstream fleet to the shadow fleet. We present two feasible scenarios, as well as an absolute upper bound for replacement costs.

Scenario 1: Conversion of the Existing Mainstream Fleet into the Shadow Fleet (~$10 bn)

Mainstream fleet vessels can touch G7+ jurisdictions through a combination of ownership, International Group (IG) P&I insurance, ISM/commercial management, and flag. We distribute the 64 Aframax tankers (for crude) and 440 Handysize tankers (for products) into four functional groups:

1. Vessels with G7+ ownership and IG insurance (46% of crude volumes, 38% of products volumes)
2. Vessels with G7+ IG insurance only (31% of crude volumes, 34% of products volumes)
3. Vessels with G7+ ownership, IG insurance, and flag (15% of crude volumes, 22% of products volumes)
4. Remaining vessels, which are assumed to adapt voluntarily without requiring formal structural changes (8% of crude volumes, 6% of products volumes)

For the purposes of this scenario, we assume that Russia will only need to purchase new tankers to replace those *owned* by G7+ entities; these purchases make up the bulk of the estimated $10 bn total. For other tankers, Russia incurs annual and volume-based costs for insurance and re-flagging. Costs for Aframax and Handysize tanker adaptation are described in Tables 3.2 and 3.3, respectively.

Table 3.2: Estimated costs for adapting 64 Aframax tankers for Russian crude oil transport

Category	# of tankers	Price, $ mn			
		Ownership	Insurance (annual)	Flag (annual)	Total
Changing ownership + IG insurance (46%)	29	1,450.00	8.17	-	1,458.17
Changing IG insurance only (31%)	20	-	5.64	-	5.64
Changing ownership, flag and IG insurance (15%)	10	500.00	2.82	0.20	503.01
Voluntary adaptation (8%)	5	-	-	-	-
Total	64	1,950.00	16.63	0.20	**1,966.83**

Table 3.3: Estimated costs for adapting 440 Handysize tankers for Russian oil products transport

Category	# of tankers	Price, $ mn			
		Ownership	Insurance (annual)	Flag (annual)	Total
Changing ownership + IG insurance (38%)	167	5,093.50	15.85	-	5,109.35
Changing IG insurance only (34%)	150	-	14.24	-	14.24
Changing ownership, flag and IG insurance (22%)	97	2,958.50	9.21	1.50	2,969.21
Voluntary adaptation (6%)	26	-	-	-	-
Total	440	8,052.00	39.29	1.50	**8,092.79**

Cost assumptions are described in Table 3.4. Note that for vessels requiring insurance replacement, annual insurance costs are benchmarked against mid-2025 Baltic Exchange / Baltic Investor Indices estimates for

Aframax tankers, covering combined Hull & Machinery and P&I insurance. Insurance costs for Handysize tankers are derived on a proportional basis relative to Aframax vessels.

Table 3.4: Assumptions for vessel adaptation cost calculations

Parameter	Details	Price, $	Notes	Source
Purchase price	Aframax, >10 years old	50,000,000	Per vessel	Athenian Shipbrokers S.A., monthly secondary-market reports, 2025
	Handysize, >10 years old	30,500,000	Per vessel	
Insurance	Aframax, >10 years old	772	Daily. 554$ per day + 30% premium.	Lloyd's List article, citing Baltic Investor Indices, 2025
	Handysize, >10 years old	260	Daily. 200$[4] per day + 30% premium.	
Flag (Panama-like benchmark)	Initial Registration Fee	2,500	One-time	ShipUniverse, "The Cheapest Flags to Register Your Ship (and Why)," 2025
	Annual Government Fee (Aframax)	1,500	Once a year	
	Annual Government Fee (Handysize)	1,000	Once a year	
	Annual Tonnage Tax (Aframax, 60,000 NT)	0.26	per ton/year	
	Annual Tonnage Tax (Handysize, 17,000 NT)	0.20	per ton/year	

Scenario 2: Reallocation of Global Shadow Fleet (~$1 bn per year)

In this scenario, Russia compensates for the loss of mainstream tanker capacity not by acquiring or adapting vessels, but by reallocating existing shadow tankers already operating on other routes. This approach is plausible for two reasons. First, a sizable pool of shadow tankers already operates globally, serving intra-Asia trade, Middle Eastern routes, and sanctioned flows linked to Iran and Venezuela. These vessels are structurally compatible with Russian crude oil and oil product exports, and are already detached from G7+ maritime services. Second, shadow tanker operators are primarily motivated by commercial returns rather than political alignment. Higher freight earnings can therefore incentivize a redirection of vessels without requiring changes in ownership, flag, or insurance.

From Russia's perspective, this pathway offers several advantages. It requires no upfront capital expenditure, avoids delays associated with vessel acquisition or re-flagging, and can be implemented rapidly. It also shifts operational risk away from state-affiliated entities, relying instead on market-based incentives. The trade-off, however, is structural: instead of a one-off cost, Russia incurs a persistent increase in transport costs, effectively accepting a permanent revenue haircut to secure sufficient tanker availability. Russia would offer above-market freight rates to pull shadow tankers away from alternative employment and anchor them on Russian export routes.

Methodology and cost estimation

Across both crude and product segments, we assume that Russia must offer an additional 30% freight premium above prevailing market rates to successfully divert shadow tankers from other routes and retain them on Russian export flows. This premium represents the incremental cost borne by Russia, either directly through freight payments or indirectly via price discounts embedded in delivered crude and product sales.

[4] Lloyd's List article provides daily insurance costs for Aframax tankers; Handysize tanker costs were estimated proportionally based on vessel deadweight.

For crude oil shipments (Aframax class), we rely on IEA-reported freight rates for November 2025 for Baltic benchmark routes. For Black Sea-linked Aframax trades, where IEA route-specific data are not available, we apply an analytical assumption based on comparable Aframax market conditions and distance-adjusted voyage economics. These rates provide a baseline $/bbl transport cost reflective of prevailing dirty tanker market conditions.

For oil products (Handysize class), where route-specific $/bbl data are less consistently available, we use the Baltic Clean Tanker Index (BCTI) as a proxy for market-wide clean tanker earnings. The index is converted into daily vessel earnings using standard market conventions and translated into a per-barrel freight cost based on average voyage durations and cargo sizes.

Applying this framework yields an estimated **annual incremental cost of approximately USD 186 million for Aframax crude oil shipments and USD 823 million for Handysize oil product shipments, resulting in a combined recurring burden of roughly USD 1.0 billion per year**. These estimates reflect only the additional premium required to crowd in shadow tonnage; full calculation details and route-level breakdowns are presented in Tables 3.5 and 3.6.

Table 3.5: Annual incremental freight for redirected Aframax

Route	Monthly volume (bbl)	Annual volume (bbl)	Base freight ($/bbl)[5]	Incremental +30% ($/bbl)	Annual incremental cost ($ mn)[6]
Baltic (Primorsk)	10,730,000	128,760,000	1.67	2.17	64.5
Baltic (Ust-Luga)	6,746,000	80,952,000	1.67	2.17	40.6
Black Sea (Novorossiysk)	6,886,000	82,632,000	3.25	4.22	80.6
				Total	**185.6**

Source: Monthly volume: Kpler, KSE Institute analysis; Base freight: International Energy Agency Oil Market Report (December 2025)

Table 3.6: Annual incremental freight for redirected Handysize

Port	Monthly volume (bbl)	Annual volume (bbl)	Avg ship size (bbl)	Avg. duration (days)	Daily earnings ($)[7]	Base freight ($/bbl)[8]	Incremental +30% ($/bbl)	Annual incremental cost ($ mn)
Ust Luga	16,769,797	201,237,564	347,921	43.39	34,689	4.33	5.62	261.2
Novorossiysk	8,736,396	104,836,752	168,656	20.61		4.24	5.51	133.3
Primorsk	9,711,116	116,533,392	217,251	28.51		4.55	5.92	159.1
Tuapse	4,956,332	59,475,984	192,106	21.2		3.83	4.98	68.3
Vysotsk	4,574,830	54,897,960	248,632	38.38		5.35	6.96	88.2
Taman	2,011,328	24,135,936	228,560	26.91		4.08	5.31	29.6
St Petersburg	2,288,785	27,465,420	163,485	42.61		9.04	11.75	74.5
Nakhodka	674,354	8,092,248	224,785	11.59		1.79	2.33	4.3
Vanino	640,879	7,690,548	183,108	9.71		1.84	2.39	4.2
Vladivostok	56,121	673,452	33,673	1.67		1.72	2.24	0.3
							Total	**823.1**

Source: Monthly volume, Avg. duration: Kpler, KSE Institute analysis

[5] The freight rate for the Black Sea (Novorossiysk) was not sourced from the IEA report; it was taken from a Reuters article for Suezmax tankers and proportionally estimated for Aframax-class vessels.
[6] This represents the additional cost Russia would potentially incur to redirect existing tankers to its own trades.
[7] The daily earnings of $34,689 per day were calculated using the Baltic Clean Tanker Index (BCTI, 746) multiplied by a $46.5/day factor per index point. The multiplier 46.5 was derived from historical BCTI-to-USD/day conversion trends for Medium Range product tankers observed in 2025
[8] Base freight per barrel was calculated by dividing the daily earnings per vessel by the average cargo volume per voyage. This converts daily earnings ($/day) into a per-barrel freight rate ($/bbl), which was then used to estimate annual costs with an added 30% premium for tanker redirection.

Upper Bound: Full Vessel Acquisition (~$16-17 bn)

To determine an upper bound on vessel replacement costs that Russia may incur due to a maritime services ban, we calculate the costs of fully replacing the affected tanker capacity through outright vessel acquisitions on the secondary market. A strategy based on full acquisition would provide Russia with complete operational and legal control over the replacement fleet, including ownership structure, vessel management, insurance arrangements, and flagging decisions. This would significantly reduce exposure to future enforcement risks associated with maritime services restrictions, allowing Russia to internalize critical elements of its oil exports and increase resilience to prolonged sanctions pressure. Acquired vessels could be consolidated under state-linked shipping entities such as Sovcomflot or Rosnefteflot JSC.

Methodology and cost estimation

The cost estimates in this scenario are derived by linking observed average shipment sizes to corresponding tanker classes and applying prevailing 2025 secondary-market prices for vessels older than ten years.

For crude oil exports, white-fleet shipments were observed to transport on average approximately 750 thousand barrels per voyage, consistent with Aframax-class tankers with a deadweight of roughly 100–115 thousand tons. In 2025, Aframax tankers older than ten years traded at an average secondary-market price of around $50 million.[9] Replacing the lost mainstream crude oil capacity therefore implies the acquisition of 64 Aframax vessels, corresponding to total capital expenditures of approximately $3.2 billion.

For oil products, the average cargo size carried by mainstream-fleet vessels was approximately 220 thousand barrels per voyage, consistent with Handysize product tankers with a deadweight of roughly 30–40 thousand tons. In 2025, Handysize tankers older than ten years traded at an average price of about $30.5 million.[10] Fully replacing mainstream product tanker capacity would thus require the acquisition of roughly 440 Handysize vessels, at an estimated total cost of around $13.4 billion.

Taken together, a full replacement of mainstream fleet capacity through outright vessel purchases implies total capital expenditures in the range of **$16–17 billion**.

Annex 4: Remaining Operators from G7+ Jurisdictions

Because the price cap for premium oil products has consistently sat above market price, many Western firms continue to engage with the Russian oil trade without running afoul of the sanctions regime. Switching from the OPC to a maritime services ban, however, would necessarily end the involvement of any G7+ firms in the export of Russian oil. To understand potential sources of opposition coming from vested interests in the West, we present a breakdown of involved parties by country in Tables 4.1 and 4.2.

[9] The vessel price is calculated as the average sale price of 10-year-old Aframax tankers, based on monthly secondary-market reports by Athenian Shipbrokers S.A. for 2025.
[10] The vessel price is calculated as the average sale price of 47K DWT, 10-year-old product tankers, based on monthly secondary-market reports by Athenian Shipbrokers S.A. for 2025.

Table 4.1: Current involvement of G7+ countries in mainstream fleet, by % of *crude oil* volume

Country	Ship manager/ commercial manager	Registered owner	ISM manager	Flag	Insurance
Greece	61%	58%	59%	9%	0%
Cyprus	3%	1%	1%	0%	0%
Malta	2%	1%	3%	6%	0%
Italy	<1%	1%	0%	0%	0%
United Kingdom	0%	0%	1%	0%	61%
USA	0%	0%	0%	0%	12%
Norway	0%	0%	0%	0%	22%
Sweden	0%	0%	0%	0%	2%
Japan	0%	0%	0%	0%	1%

Table 4.2: Current involvement of G7+ countries in mainstream fleet, by % of *oil product* volume

Country	Ship manager/ Commercial manager	Registered owner	ISM manager	Flag	Insurance
Greece	57%	54%	54%	8%	0%
Cyprus	1%	1%	<1%	0%	0%
Malta	<1%	<1%	0%	14%	0%
Italy	1%	1%	1%	<1%	0%
United Kingdom	0%	0%	<1%	0%	62%
USA	<1%	<1%	0%	0%	19%
Norway	0%	<1%	0%	0%	12%
Sweden	0%	0%	0%	0%	4%
Japan	<1%	<1%	0%	0%	2%
Latvia	<1%	<1%	<1%	0%	0%
Switzerland	<1%	0%	0%	0%	0%
Croatia	<1%	<1%	<1%	<1%	0%
Belgium	<1%	0%	0%	0%	0%
Netherlands	<1%	<1%	<1%	0%	0%
Germany	<1%	0%	1%	0%	0%
Portugal	0%	0%	0%	<1%	0%
Monaco	0%	0%	<1%	0%	0%
Luxembourg	0%	0%	0%	0%	<1%