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Europe's choice:

Military and economic scenarios for the War in Ukraine

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Europe's choice

Military and economic scenarios for the War in Ukraine

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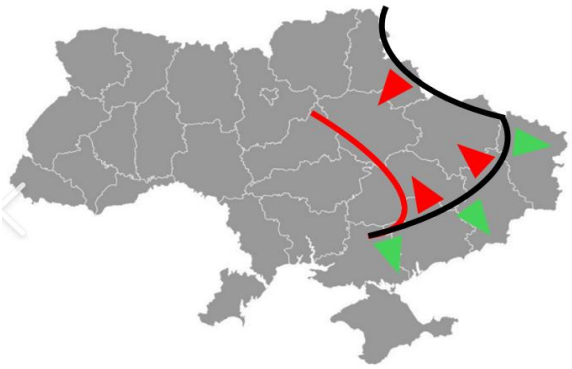
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Military scenarios and their costs

Scenario 1: **Russia** continues gradual advance and eventually pushes towards **Dnipro River**. Forces a peace settlement on terms beneficial to Russia.

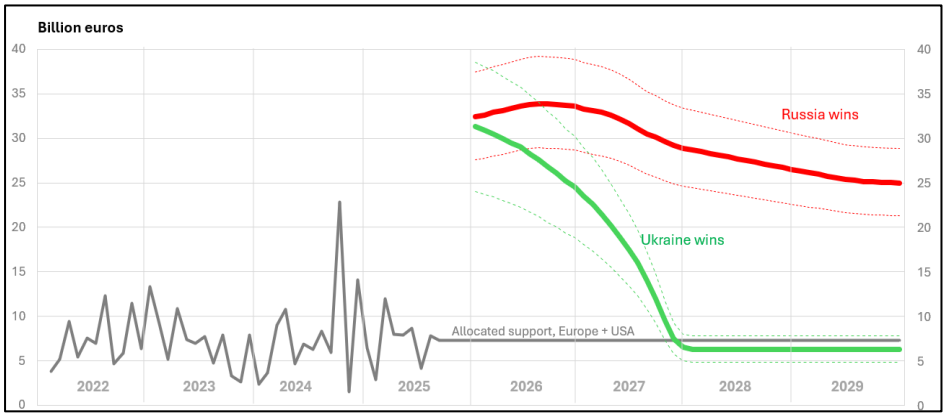
Scenario 2: **Ukraine** gains superior combat power and starts to retake **occupied land**, as in 2022. Peace agreement safeguards vital Ukrainian interests.





Needs for Ukrainian superior combat power

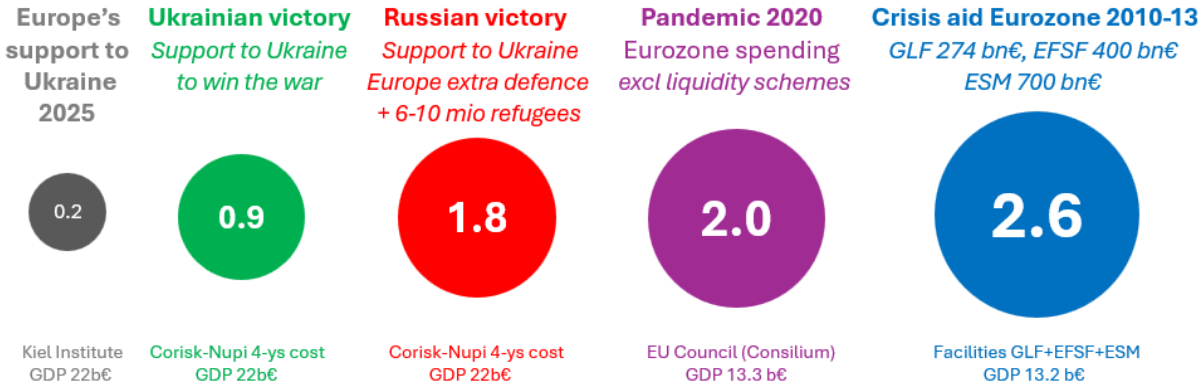
- Fully equip 95 brigades
- 8 million drones
- 1,500 – 2,500 battle tanks
- 2,000 – 3,000 artillery
- 10,000 – 20,000 IFV/APC
- Missiles 300+ km
- Extended *Sky Shield* covering all Western Ukraine



Next 4 years

Historic support (grey) and monthly cost of support if Scenario 1 versus Scenario 2 becomes manifest by January 2026, with instant and maximum accelerated buildup of military capacities.

Total costs as a percentage of European GDP during the relevant periods:



1 Introduction

This report explores the choices confronting Europe to secure sustainable peace in Ukraine. The recent 28-point peace plan proposed from the Trump administration illustrates the urgent need for Europe to take initiative and ownership of diplomatic efforts to end Russia's illegal war. The plan revealed how the US administration is out of touch with the real issues at stake, and misreads what is required to secure a stable and safe Ukraine and Europe. European leaders scramble to steer the process in the right direction without antagonising Trump and his administration, but this is more about retaining transatlantic unity than about finding durable solutions with Moscow. Russia's leadership has never during the entire war displayed any gesture of good faith, willingness to compromise, or genuine willingness to negotiate.[1] Hence, no matter what a revised peace plan ends provides, it is highly unlikely to bring peace.

Europe needs to devise a plan to end the war which will involve the United States, but not rest on US leadership. The leading principle of such a plan should be increased military and economic pressure on Moscow. This report aims at contributing to such a plan, with a thorough analysis of what the military requirements are, and what are their cost. Similarly, we estimate the cost for Europe in case of a Russian victory. The report draws on recent analysis published on 11 November 2025, which focused on the impacts and costs of two scenarios for the war in Ukraine.[2] Since that publication, important new issues have surfaced, including, confiscation of Russian assets, and the Russian-American peace proposal.[3] This report addresses these developments and brings new analysis on the issues of confiscation, funding a plan for Ukrainian victory, minimising corruption in military procurement, and other burning issues.

Russia's illegal war of aggression against Ukraine started in 2014 and has inflicted vast human suffering and economic losses. This study examines economic costs for Europe, Ukraine, and Norway if a (partial) victory through military or political breakthroughs enables either Russia or Ukraine to secure a peace conclusion on favourable terms. We assess the chances of success for President Trump's attempts at negotiations as slim. Russia has not demonstrated any real willingness to compromise, and is still putting forward its maximum demands, which in practice means Ukrainian submission. The new US proposal devises Russian control over all of Donetsk and Luhansk, freezing frontlines in Kherson and Zaporizhia, reducing the Ukrainian army by half, allowing no foreign troops or NATO accession, a proposal with no political backing from Europe.[4] Russia continuously tests NATO's resolve and reactions by violating borders across Europe. The war will thus most probably continue as a war of attrition, where the trajectories of the two countries' economic and military development will determine the outcome.

This report outlines two contrasting scenarios for the future development of the war, under which circumstances they may be realised, and the subsequent consequences they may have for European security and defence needs. The report aims to illustrate to European and Norwegian decision-makers

[1] An early attempt at dialogue during Ukraine's advances in 2022, ended on mutual unwillingness to compromise, according to: Samuel Charap and Sergey Radchenko, The Talks That Could Have Ended the War in Ukraine, *Foreign Affairs*, 16 April 2024.

[2] Bjørtvedt, Friis, et al: To scenarier for Ukraina-krigen, *Norwegian Institute of International Affairs*, Oslo, 11 November 2025.

[3] Mattea Bubalo, "At least 20 killed in one of Russia's deadliest strikes on western Ukraine", *BBC*, 19 November 2025.

[4] Felicia Schwartz et al, Witkoff's back-channel push on Ukraine alarms allies, *Politico*, 20 November 2025.

the fundamental economic and security policy options that result from the two scenarios outlined, and how outcomes of the war may affect Europe's security needs and defence spending. The situation presents Europe with a call for resolute action to match overall political rhetoric.

The main question we ask in this report is what it will take for Russia or Ukraine to succeed militarily: What will be the costs for Europe and its allies, if Russia wins or succeeds in neutralising Ukraine militarily and politically (Scenario 1), and what are the costs of enabling Ukraine to resist Russian attacks and regain the opportunity for limited counteroffensives (Scenario 2)? We argue that the second scenario may change the Russian cost-benefit calculus, and thereby offer the most realistic path to negotiations that can end the war. The report is authored by leading Norwegian experts on security policy, military doctrine, sanctions, and economics. The analysis and conclusions presented reflect the views of the authors alone and do not represent the positions of their affiliated institutions.

Chapter 2 *Political analysis* outlines the geopolitical factors that determine Ukraine's and Europe's defence capabilities and alliance opportunities. The chapter is edited by Senior Research Fellow Karsten Friis (NUPI). In Chapter 3, we present the scenarios, including how we define and delimit them, and the justification of building the analysis on two contrasting outcomes.

Chapter 4 *Humanitarian analysis* discusses the social and humanitarian developments in the Ukraine war, and their costs under the two scenarios. The development of the humanitarian situation in Ukraine has consequences for millions of people and is relevant to the ability to continue the fight. Chapter 5 *Military analysis* states that military strength determines the relative balance of forces between Russia and Ukraine, and their ability to achieve their strategic aims. Key factors for military strength, including the production of key armament systems, are analysed. We estimate Russian availability and supply of military materiel and derive from this Ukraine's materiel and resource needs to achieve (partial) victory and peace on acceptable terms. Furthermore, we deduce the increased humanitarian costs and the accelerated investments and resources that European states must be provided with in the short term, in the event of a Russian (partial) victory in the Ukraine war. Cost estimations correspond to the resource requirements under each scenario. Chapters 4 and 5 are edited by Lieutenant Colonel Trygve Johannes Smidt (Red Cross, Norwegian Military Academy).

Chapter 6 *Economic Analysis* discusses the economic developments in Russia and Ukraine, which form the basis for the military resource analyses in Chapter 5, with particular emphasis on the outlook for future growth and developments in the Russian economy. Chapter 7 *Costs and conclusions* are based on the resource needs from Chapter 5 and estimate the total costs to Europe in case of a Russian (partial) victory, and the costs of enabling a corresponding Ukrainian (partial) victory in the war. We also assess the economic consequences for the defence of Europe and Norway, and ways to fund Ukraine. We calculate fiscal costs and discuss some of the scenarios' further economic effects without quantifying these in their full depth. These chapters have been edited by Erlend Bjørtvedt (Corisk) and Olav Slettebø (Statistics Norway), and they have also assisted in developing the cost estimates in Chapter 5.

All costs in this study are stated in constant 2025 values and are converted according to the exchange rate of EUR 1 = NOK 11.60, and according to the exchange rate of USD 1 = EUR 0.92.

1.1 Summary and conclusions

We establish two scenarios for the outcome of the war, based on the current trends and trajectories of the conflict. If both sides' access to, and utilisation of, resources remain unchanged the conflict will gradually approach Scenario 1, where Russia is militarily victorious or pushes Ukraine into peace terms that secure key Russian interests. Scenario 2 implies that Ukraine succeeds militarily and regains the initiative or pushes Russia to conclude peace on terms that safeguard key Ukrainian interests. We assess that the second scenario, in combination with continued economic pressure and diplomatic efforts, is required to compel Russia to accept a negotiated compromise to end the conflict. We assume that both full Russian occupation of Ukraine, and liberation of all occupied territories, are unlikely within five years. We believe that Russia will not abandon its long-term goal of occupation and annexation of Ukraine, or at least a strategic neutralisation of Ukraine with strong Russian influence, securing that Ukraine remains outside of the EU and NATO. A scenario involving ceasefire could lead to the realisation of both scenarios 1 and 2, depending on whether Europe further strengthens Ukraine's future capacities for self-defence.

Scenario 1 describes a Russian (partial) victory. Russia achieves decisive military victories, occupies more land westwards towards the Dnipro, and succeeds in pressuring Ukraine into a clearly disadvantageous peace settlement. As a result, Ukraine loses further territories and becomes unable to pursue the stated national strategies of gradual integration and development, including NATO or EU membership. Russian political, economic and social influence will be substantial. It may be necessary for Ukraine to prolong the state of emergency, with the risk of concentration of power and erosion of democracy. In a worst case scenario, there will be a return to oligarchy with widespread corruption and social distrust, and a reversal of the trajectory towards democratisation and transparency. The rest of Ukraine becomes a kind of Bosnia-Herzegovina, i.e. a country where the effects and legacies of the war lead to political, economic and social stagnation. In a worst case scenario, Ukraine will become a so-called "failed state".

At the same time, Russia will achieve geopolitical progress, free up military resources, and be able to direct threats against Moldova, Belarus, the Baltic States, or the Nordic region. If this scenario materialises, NATO's defence must be accelerated along the entire border area, including in the Nordic and Baltic countries if the current deterrence stance is to be maintained. Ukraine and the rest of Europe will experience constant hybrid attacks and Russian political influence operations directed against the general public. Russia will be able to occupy more of Ukraine's energy production and reestablish Ukrainian dependence on Russian energy. It is likely that many Ukrainians will leave the country, both as war refugees and as economic migrants. This will increase labour costs and weaken innovation in Ukraine and impose a burden on European countries that could result in budget deficits and welfare cuts, continued growth of populist parties, and increased political polarisation. Foreign investment in Ukraine will be reduced due to a higher country risk premium, following political instability with the risk of Russian influence over key policy areas. This will reduce economic growth opportunities and increase the rest of Ukraine's borrowing costs, which we do not quantify in this study.

Scenario 2 describes a Ukrainian (partial) victory. This entails that the Armed Forces of Ukraine manages to halt further Russian expansion, as well as achieving better air defence coverage throughout Ukraine. As a result of Ukrainian military successes, Russia changes it calculus and seeks to end hostilities. It may

involve that Ukraine either wins back parts of occupied territories, or otherwise induces an agreement on sustainable terms. Ukraine will have enough military resources to pose a threat to Russian forces and, for a shorter or longer period, keep Russian forces tied up in Ukraine. The Ukrainian state of emergency can be lifted, allowing for elections and a gradual normalisation of political life. This will enable further EU integration and meet preconditions for further economic growth. Political stability will reduce country risk and attract increased foreign investment, and in line with a reduced country risk premium, capital and borrowing costs will fall. This may provide better public finances and increased growth. Ukraine will also be able to receive further increased tax revenues and self-financing, and the defence industry will increasingly cover the armament needs of Ukraine and neighbouring countries.

Europe will have to continue supporting Ukraine with civil and military assistance for the foreseeable future, but some refugees will return, resulting in reduced costs for Europe. At the same time, there will be great need of supporting the re-construction of Ukraine's infrastructure and housing, not least for refugees and internally displaced persons who return to liberated areas. In the areas most affected by heavy fighting there is an extensive destruction of settlements, and a dire need to clear explosives and mines. Europe will continue sanctions against Russia and may seize Russian assets or channel Russian export revenues, to cover war reparations to Ukraine. We observe a number of experts testifying to the legal viability of confiscating the assets. Europe will need to strengthen defence of its eastern borders but will have more time to build its defences than under Scenario 1. Ukrainian military capabilities and expertise may also be included in the defence of Europe, to a greater extent than under Scenario 1.

In both scenarios, we assess that Europe must mobilise and fund the bulk of allied support to Ukraine, with some contribution also from Canada, Japan, etc. The United States is likely to end its support for Ukrainian and European defences, but will probably be willing to sell arms and continue key sanctions against Russia. The United States in the autumn of 2025 added new sanctions of Lukoil and Rosneft. Russia will experience continued economic decline, with reduced ability to produce important types of weaponry. After the initial mobile offensive and counter-offensive in 2022, and the more static frontline following, Russian forces have been unable to utilise their armoured forces for larger breakthrough operations. Ukraine embarked upon a drone strategy to partially compensate for lack of other weapon systems, slow down Russian advances, and incur heavy losses on Russian materiel and personnel. Russia is betting on a war of attrition, targeting civilians as part of the strategy of weakening Ukraine's resilience. Both parties invest heavily in drones and drone defence, but in order to carry out limited counteroffensives, Ukraine needs significant amounts of air defence, armoured forces, mechanised infantry, artillery and long-range missiles, with their associated ammunition and support systems.

If Scenario 1 materialises, we estimate that an additional 6-11 million Ukrainian refugees will attempt to migrate to Europe. The costs of such an influx are estimated at 150 - 275 billion euros per year. We must expect this cost to decrease over the next years, leading us to estimate the cost at 524 - 952 billion euros over four years. In Scenario 2, we expect that up to 1.5 million Ukrainian refugees will return to Ukraine.

The costs will thus be significant in the period prior to the Ukrainian refugees being integrated into the workforce of host countries. Recent experience from Europe indicates that integration into the labour market takes time, partly due to uncertain economic conditions in the host countries. We must assume that costs associated with refugee migration also will be incurred after the four-year period. Any socio-

economic benefits from educated and skilled Ukrainian refugees will be realised only gradually following their arrival in European host countries. The financial burden on national budgets and, not least, the physical and structural burden on Europe's refugee arrival facilities may result in major economic and political challenges in the event of a new large influx of refugees, which Scenario 1 is likely to trigger.

We consider Russia's economy to be weaker than official figures suggest, and we estimate a recession in 2022, stagnation in 2023 and 2024, and recession in 2025 and 2026. The country is facing large economic imbalances and does not appear to be able to correct these without significant tightening of taxes, welfare measures, or a reduction in the use of military resources. The possibility of economic collapse is present, and the economic sanctions against Russia are vital in order to further reduce the country's ability to wage its war of aggression. The country's foreign trade is declining, and we consider it unlikely that there is any large hidden foreign trade with, for example, China, of a magnitude that may alter the overall picture of decline. It is important to note, however, that this picture is dynamic and that a further deterioration of the Russian economy might lead China to step up investments or support.

Military capabilities are analysed in a recognised resource model which helps explain the factors behind Russia's slow advance. We analyse what it will take to tilt the military balance in Ukraine's favour. Combat power consists of *potential combat power* in the form of volume and quantity of weapons systems, and of *combat effectiveness* primarily in the form of competency , leadership, and ability to conduct combined arms operations. Drones are a new and important element in the war, but there is almost parity between the parties in this field, and drones have clear offensive limitations. We also note that fighter aircraft play a limited role on both sides of the frontline. However, Russia's capability to deliver substantial volumes of glide bombs gives an important advantage in precision firepower. Decisive combat power requires the combined use of several types of weapons systems, tanks and tube artillery are applied as indictors of potential combat power. When we propose various increases in Ukraine's stocks of these weapons systems- tanks and artillery - it means that the country must also be provided with the other corresponding weapons systems of a modern combined arms setup to be able to create balanced capabilities[5]. It also follows that Ukraine requires increased capacity for air defence, drones, long-range missiles, etc. Tanks and artillery thus appear in the analysis as indicators of the combined strength from combinations of weapon types that work together.

Russian losses of non-repairable materiel are estimated using data from *Oryx* and other available sources, and we compare this with figures from Ukraine's General Staff. By compiling estimated definitive losses, salvage and overhaul of used materiel, as well as the output of the Russian defence industry and possible imports, we establish an estimate of net Russian tank reserves. We estimate that from 2022 to end-2025, Russia has lost 5,800 non-repairable tanks, and if it continues to lose an average of 100 tanks per month, Russia will possess around 2,250 operational tanks by the end of 2026. This is a net decrease of just over 30%, from the 3,300 vehicles possessed in 2022.

Allied support to Ukraine at the current, low level will prolong a war of attrition where the Russians slowly gain ground. This entails a risk that key Ukrainian positions will be given up, and Russia will progress

[5] Various armoured engineer vehicles for breaching roles, infantry fighting vehicles, armoured personnel carriers, fire direction vehicles, command vehicles, rocket artillery, various supply vehicles, evacuation vehicles etc.

towards realisation of Scenario 1. That scenario triggers larger flows of refugees and internally displaced people, reducing Ukraine's economic growth and capability to domestically fund public spending.

Our cost estimates in constant prices (Chapter 7) include the same cost elements in each scenario: The cost of accelerated re-armament in Europe, economic and civilian support to Ukraine including the current, and the cost effect of any increase or reduction in the number of Ukrainian refugees. Further, costs are calculated in each scenario excluding all current European defence budgets or already approved rearmament, and excluding the current costs of supporting existing Ukrainian refugees in Europe. For Europe, total costs under Scenario 1 will on average reach 2.0 - 2.5 % of GDP, or half the NATO target for total defence and related infrastructure spending, but with half of the scenario costs accruing in the form of increased refugee support which would not be defined as part of the NATO target obligation.

Scenario 1 will require efforts to increase deterrence by an accelerated strengthening of the military capacity in the Baltics, Finland and the Nordic Arctic by up to 88 billion euros in the first year, gradually declining to 39 billion euros in year four. European costs of refugees will increase sharply, with the result that total annual extra costs for Europe could be 338 - 463 billion euros in year one, declining to 319 - 432 billion euros in year two, and an estimated 287 - 387 billion euros in year three, following a Russian (partial) victory.[6] Total costs are estimated at 1,205 – 1,633 billion euros over four years. This includes the increased costs of deterring Russia beyond current defence budgets, but does not include the costs of actual warfare, or the reconstruction of Ukraine.

Of these costs, we estimate that Norway will have to cover up to NOK 90 billion in the first year, in addition to military and humanitarian support to the remains of Ukraine of NOK 95 billion, increased costs of refugee flow to Norway of NOK 50-75 billion, and accelerated establishment of a Norwegian missile brigade, ammunition and drone defence of NOK 50 billion. The total costs in the first year may thus reach NOK 285 - 305 billion, which slowly will be only marginally reduced over the next two years.

To enable Scenario 2, Ukraine must be supplied with far larger quantities of armament, than today. They will need all types of weapons systems constituting a modern army, i.e. they need the capacities to establish balanced, combined arms systems. No one single system or technology can ensure victory, and several sources of funding and production must be mobilised. The volume of supplied equipment will determine the extent to which Ukraine can deny new Russian advances, and reclaim occupied territory. Our military analysis establishes a spectrum between these limits, with a need to supply 1,500-2,500 battle tanks and 2,000-3,000 artillery systems over one or two years, adding to the total cost spectrum. Ukraine will also need up to 8 million drones of all types, air defence, and strategic missile systems. Ukraine can produce some of its needs itself. The Ukrainian defence industry currently has significant spare capacity, but needs expanded funding to utilise this capacity and increase production.

In order to mobilise more personnel for a military offensive, we support the proposal that European countries establish an expanded *European Sky Shield for Ukraine,* with allied forces guarding the airspace west of the line Odessa-Dnipro-Kyiv. Together with other civilian and military needs, we estimate a need for European funding of EUR 258 - 419 billion during the first year, depending on how quickly

[6] The large reduction in costs in the third year is based on significant development in the defence of the Baltics and Finland already in the first and second years. There is slow increase in labour force participation and the degree of self-sufficiency among Ukrainian refugees in Europe over time, but we believe this will be balanced by reduced growth in the rest of Ukraine and its ability to take care of its own internally displaced people. and that more refugees thus will be able to arrive in Europe in the following years as well.

materiel can be delivered. For full deliveries within 1-2 years, the second-year support requirement from Europe will correspond to no more than the net minimum supply level in the first year (EUR 193 billion), while repatriation of refugees and increased growth may bring additional savings of EUR 20-35 billion annually. Thereby, European support may be EUR 138-243 billion in the second year, and in the case of permanent deterrence of Russia, as low as EUR 63-88 billion in the third and fourth years. Total European support will then amount to 522 – 838 billion euros over four years.

Europe's arms industry has spare capacity for supplying Ukraine and Europe, as it directs the majority of its arms exports to countries outside Europe. Saudi Arabia, Qatar and the United Arab Emirates import up to 15 billion euros annually from Europe. These significant exports must, to greater extent, be channelled towards the defence of Ukraine and Europe, by regulations and incentives. Ukrainian defence industry has spare capacity due to a lack of funding, prior experience with monetary funding resulted in high inflation and interest rates. It is assumed that drone production may be doubled with sufficient funding, and production abroad can be part of the solution to avoid economic over-heating and corruption. Ukraine can be supported by arms transfer, redirected exports, contract buyouts, and various funding schemes.

During 2022 and 2023, Ukraine demonstrated its ability to conduct effective military offensives and re-conquer occupied land, when provided with sufficient armoured equipment, mechanised forces, artillery, and long-range missiles, as were available during those two years. A continued effort can either be funded via confiscation of frozen Russian assets (300 billion euros), or by increased European support through borrowing, bilateral support, or various EU financing mechanisms. As today, the main burden must be assumed to fall on the donor countries of Northern Europe including France. Countries in Southern Europe must also contribute, but confront high debt burdens that reduce their scope of action.

Significant opportunities for funding could emerge if governments fulfil part of the 3.5 % military spending target by providing military support to Ukraine. For several NATO countries this option will be preferable because rapid domestic defence spending may create considerable pressures in the economy. With NATO's new spending targets, part of the increased support to Ukraine may be covered within increased allocations that European countries are already obliged to carry out. The most important difference is that in the event of a permanent conflict or a Russian victory, Ukraine will incur a permanent need for support, while in the event of a Ukrainian military victory, Western support will be much reduced over time.

With our recommended support to Ukraine, with Northern European countries funding their share at eh relative level as today, these countries will on average have to increase their support to Ukraine to 2.4 pct of their GDP. Thus, they will have to allocate half of their increased defence spending under the NATO target, on the Ukraine front during the first year, with all these extra costs appearing in the form of military support that to a large extent may be allocated as part of the new NATO military spending target.

We establish how Europe may be able to fund a Ukrainian offensive, compensating for the loss of US support, based on both the countries' current distribution of aid and their share of regional GDP. This will involve both budget support (money), in-kind weaponry and equipment supplies, procurement support, and direct investment into the domestic military industrial ecosystems. Co-production, partial production abroad, and joint procurement schemes may reduce the scope for large-scale corruption. We consider that Norway will need to support European security with amounts larger than the share of GDP indicates, because our border with Russia and vast coastal and maritime territories entail self-interest in securing

military defence and support of major European powers in the event of armed conflict. Norway is also one of the few European countries with a fiscal surplus, large savings and a financial ability to contribute more within current budgetary frameworks, without resorting to external lending.

We estimate the following annual costs for Europe and Norway in euros under three scenarios, in addition to Europe's defence budgets today, and excluding the costs of future reconstruction:

Euros, constant prices		Europe	Northern Europe	Norway
Scenario 1	Year 1	338 - 463 bn	266 - 417 bn	25 - 27 bn
	Year 2	319 - 432 bn	279 - 384 bn	24 - 26 bn
	Year 3	287 - 387 bn	249 - 342 bn	22 - 25 bn
	Year 4	261 - 351 bn	225 - 309 bn	22 - 24 bn
	SUM	1205 - 1633 bn	1019 - 1452 bn	94 - 102 bn
Scenario 2	Year 1	258 - 419 bn	222 - 372 bn	19 – 31 bn
	Year 2	138 - 243 bn	128 - 226 bn	8 – 17 bn
	Year 3	63 - 88 bn	59 – 82 bn	6 – 8 bn
	Year 4	63 - 88 bn	59 – 82 bn	6 – 8 bn
	SUM	522 - 838 bn	468 – 762 bn	39 - 64

If Scenario 1 occurs and we assume these costs, where Europe compensates for expected US allocations, we arrive at total costs for Europe of EUR 1,205 - 1,633 billion over the four-year period.

If Scenario 2 is to be enabled, and Europe compensates for expected US allocations, we arrive at total costs for Europe of EUR 522 - 838 billion over the four-year period.

Continuation of current support to Ukraine will gradually enable Russian victory, which will be twice as expensive to Europe than enabling Ukrainian military superiority and forcing Russia to sustainable peace.

The annual costs of different scenarios for Europe can be seen in a historical perspective: [7]

1. Russian (partial) victory, Europe's cost	1.8% of GDP
2. Ukrainian (partial) victory, the cost of Europe	0.9% of GDP
Eurozone, Greece bailouts 2010-2012	0,9% of GDP [8]
USA, Vietnam War efforts 1965-1975	1.0% of GDP
USA, support for the Soviet Union 1941-1945	1.4% of GDP
USA, Korean War efforts 1950-53	1.7% of GDP
Germany, Energy Subsidies 2021-2023	1.9% of GDP [9]
Eurozone, total crisis relief 2010-13	2.6 % of GDP [10]
USA, support to Britain 1941-45	3.2% of GDP

[7] Source if not otherwise stated: Torbjörn Becker et al, "Swedish support for Ukraine in an international context", *Stockholm School of Economics*, SITE, report to the Swedish Fiscal Policy Council, 2025. Based in part on: Christoph Trebesch et al, "The Ukraine Support Tracker: Which countries help Ukraine and how?" *Kiel Working Paper*, no. 2218, pp. 1-75, 2024.
[8] Eurozone GDP was 9,300 bn euros in 2011. Total bailouts of Greece were 274 bn euros over three years, or 91 bn euros per year.
[9] Total German energy support to the population and businesses in the period from September 2021 to June 2023 was 158 billion euros, compared to an official GDP of 3.989 billion euros in 2022, and 4.219 billion euros in 2023. Giovanni Sgaravatti et al, "National fiscal policy responses to the energy crisis", Bruegel dataset, 26 June 2023.
[10] Greece Lending Facility 274 bn euros, EFSF effective 400 bn euros (committed), ESM 700 bn euros. Over 4 years yields an average of 344 billion euros committed, against an average Eurozone GDP of 13,200 billion euros during the period 2010-2013.

Norway should reasonably cover 8-10% of Northern Europe's costs in both scenarios. The resulting annual costs, beyond the current defence budget, are compared with some other costs and revenues:

Current support, cost in 2025	NOK 96 billion
Russian victory, avg. 2026-29, annually	NOK 273 - 296 billion
Ukrainian victory, avg. 2026-29, annually	NOK 114 - 186 billion
Current Norwegian defence budget, 2025	NOK 103 billion
Government pandemic cost, average 2020-21, annually	NOK 116 billion
The oil fund's return, nominal values, 2023	NOK 2,222 billion
The oil fund's return, nominal values, 2024	NOK 2,511 billion

In 2025, Norway will provide NOK 96 billion in support to Ukraine, of which NOK 83.5 billion is military aid. The original budget spending for 2025 was NOK 85 billion, but another 11 billion in military commitments in the 2026 budget were frontloaded in November for allocation in 2025. While the two scenarios will have almost equal cost for Norway in the first year, the costs will differ a lot over a four-year period. Scenario 1 with a Russian (partial) victory gives average annual costs of NOK 284 billion (range 276 - 296 bn), equivalent to 7 percent of Norway's non-oil GDP (5.6 pct of total GDP). This will be the costliest crisis in modern times. In comparison, all Covid-19-related expenditure over the national budget 2020-2022 cost in total about NOK 250 billion, notwithstanding production loss. Annual defence costs at an average of NOK 284 billion are very high, even for a rich country like Norway.

To enable Scenario 2 with a Ukrainian offensive and acceptable peace agreement, Norway must expect average annual costs of NOK 150 billion (range 114 - 186 bn) over the years 2026-2029, equivalent to approximately 3.6 percent of Non-oil GDP (2.9 pct of total GDP). This is also a significant spending, but it will not be in violation of the fiscal rule. Since the expected real Oil Fund return was adjusted down to 3 pct in 2017, fund withdrawals have averaged 2.8 pct. The rule allows for the withdrawal to exceed three per cent during recessions or serious crises. Support to Ukraine with NOK 150 billion in 2026 may be covered with oil revenue spending at 3.14 pct. For the years 2027-2029, annual support of NOK 150 billion can be maintained even with a withdrawal of less than 3 pct of the fund, without other budgetary cuts. This is due to significant replenishment of funds from the central government's net cash flow. It is thus entirely possible to implement support that gives Ukraine an advantage in the war, without compromising Norway's fiscal rule of not spending more than 3% on average over several years.

The NOK 150 billion cost is an annual average over four years - in practice, spending in 2026 (NOK 220-360 billion) will be significantly higher than in the following years. It will be much lower in 2027 and much lower in 2028-29. However, even high spending in 2026 will not be in violation of the fiscal rule. Already in *Report to Parliament No. 29 (2000-2001)*, the government clarified that the fiscal rule is long-term, and that a key considerations is for economic policy to be sustainable over time. Support to Ukraine cannot be assessed as putting lasting pressure on public finances, as, for example, an expansion of social security entitlements would. Spending in excess of 3 percent of oil revenues in a single year, contributing to end a serious war in Europe, is fully in line with the intentions behind the fiscal rule.

This study finds that:

- A continuation of the current support to Ukraine will gradually allow a certain Russian military superiority on the battlefield, Russia will gradually gain ground and occupy more Ukrainian territories, pushing for a peace agreement on Russian terms. This may result in up to 6-11 million new refugees arriving in Europe, and induce needs of substantial military, social and humanitarian support for the remaining Ukrainian state.
- Such a Russian (partial) victory could, in a worst case scenario, lead to confrontations that threaten Europe as we know it. Over the next four years, the threat will cost Europe 256 billion euros in accelerated re-armament to defend the Baltics and the Nordic High North, it will entail increased needs for support to the remainder of Ukraine, and up to 952 billion euros in increased costs for receiving refugees – all of this amounting to a total of up to 1.633 billion euros in increased, direct European economic costs.
- If Europe supports Ukraine with significant amounts of armaments that enable superiority on the battlefield, as Ukraine enjoyed with more extensive Western support in 2022, it will incur a total of up to 838 billion euros in increased European costs over the next four years, i.e. about half of the cost that will be incurred under the alternative of a Russian victory. Confiscation of frozen Russian assets will almost cut in half this cost.
- The costs of enabling Ukraine to make clear military progress with room for a favourable and durable peace, are thus slightly lower (up to 838 billion euros) than only the increased refugee costs alone (up to 952 billion euros) that accrue if Russia pushes towards the Dnipro River and enforces a peace deal on Russian terms.
- Norway can fund a noticeable share of the European contribution to Ukrainian victory, over the next four years, without violating its fiscal rule. If deliveries of military equipment to Ukraine progress faster, at a higher cost in the first year, it will entail spending more than 3 percent of oil revenues in one single year, but this is justified by the intention – to manage a European security crisis, and the fact that the fiscal rule sets a limit of 3 percent spending in the long term. Over the entire four-year period 2026-2029, the increased spending on support for Ukraine will be within less than 3 percent Oil Fund withdrawals, and without having to reduce other fiscal spending.
- Confiscation of Russian assets in Europe is justified legally, by Russia's use of the funds to prepare for a war of aggression with conduct of extensive war crimes, in violation of international law. Confiscation could fund about half of the cost of equipping Ukraine to achieve military progress and achieve a favourable peace.

2 Political analysis

2.1 Background

Russia's war against Ukraine has continued since 2014. The war can be seen as a consequence of a fundamental fear and aversion in the Kremlin towards other post-Soviet countries turning westwards – politically and economically.[11] The causes of the war can be traced back to 2013, when Ukraine's then President Viktor Yanukovych was forced to reject a negotiated association agreement with the EU, in favour of an agreement with Russia. The subsequent demonstrations on the Maidan Square in Kyiv led to Yanukovych's ouster and flight to Moscow. Prior to the invasion of 2014, Russian authorities initiated separatist demonstrations and riots in eastern and southern Ukraine, before sending troops into Crimea and Donbas.[12] Despite attempts at negotiations via the Minsk Agreements and other processes, Russia never agreed to give back areas that were occupied and annexed. In many ways, Russia succeeded in slowing down or stopping Ukraine's democratisation and westward orientation – by keeping the war sufficiently "hot" to limit investment and development in Ukraine. After 2020, it appears that President Putin sought more direct control over Ukraine, not unlike his strong influence over Belarus. In 2021, Putin published a quasi-historical narrative stating that Russia, Belarus and Ukraine are one country and one people – and that Ukraine had been seduced by Western powers to turn away from its true brotherhood with Russia.[13] The following year, as is well known, he launched the full-scale invasion of Ukraine.

For years, Russian media have fuelled conspiracy theories and anti-Western propaganda in which liberal values are ridiculed as a sign of Western feminisation, weakness, and decadence. At the same time, the same West is being portrayed as a threat to Russia. On this basis, Russian society is militarised – from kindergartens upwards – while "traditional values" are highlighted and cultivated. According to Timothy Snyder "Russia can't have a domestic policy. The elite have stolen all the money, all the laws are corrupt, and there is almost no social mobility or possibility of change in the lives of most Russians, so foreign policy has to compensate and provide the raw material — scenography — for management".[14] It is therefore through foreign policy Putin can achieve most success and appear to act decisively, which is why the regime needs a Western enemy to secure this image – and power.

Even though Russia wants to bring Ukraine under its control by war, Europe also face a regime that considers the West a threat. Partly, this is instrumental, to appear as a protector of the people, and partly it is real in the sense that modern, liberal forces are a direct threat to the regime's survival. Democratic "contagion" from the Maidan movement to Russia would be catastrophic for the survival of the regime. It

[11] Paul D'Anieri (2023). *Ukraine and Russia: from civilized divorce to uncivil war* (Second edition.). Cambridge University Press; Serhii Plokhy, (2023), *The Russo-Ukrainian War: The Return of History*. W.W. Norton & Company, Inc; Eugene Finkel (2024), *Intent to Destroy: Russia's Two-Hundred-Year Quest to Dominate Ukraine*. New York: Basic Books; Ukraine and Russia.
[12] Marieke de Hoon, «Dutch Court: Russia Had Overall Control of Forces in Eastern Ukraine Downing of Flight MH17,» *Just Security*, December 19, 2022.
[13] Vladimir Putin, "On the Historical Unity of Russians and Ukrainians", 12 July 2021, http://en.kremlin.ru/events/president/news/66181
[14] Sam Jones, «Historian Tim Snyder: «Our misreading of Russia is deep. Very deep",» *Financial Times*, July 28, 2023, Vijesti.

is therefore of strategic interest for Moscow to weaken, divide, and undermine Western societies. Driving a wedge into the transatlantic relationship is the optimal bounty they can win in this context.

The war is not only about Ukrainian security, but also about European and transatlantic security. The current Russian regime has put a lot of emphasis over the last years that it is in conflict with Europe and European values. Based on its influence campaigns, sabotage, and other so-called hybrid methods, Kremlin's objective seems to be to undermine Western democracy and the social models upon which it rests. Success in Ukraine will likely encourage Russia to continue its subversive tactics. This could both put increased pressure on countries in what Russian consider to be tits "sphere of influence" – i.e. the post-Soviet area and former Warsaw Pact countries[15] – and pose threats to Western countries, institutions and values wherever possible. When European leaders say that Ukraine is fighting on behalf of Europe and defending Western liberal values, they have an important point. A loss can be very costly, economically, politically, socially – and morally – for Europe.

German political scientist Carlo Massala addresses how Western governments have reduced Ukraine's military capabilities by withholding longer-range artillery systems or placing restrictions on the Ukrainian use of advanced armament.[16] He observes a sense of cynicism in Western actions, in wanting to see Ukraine fight for democracy but without fully enabling that defence, and without Western governments taking any risk. He introduces an important scenario after a Russian victory where a deep sense of resentment and bitterness develops among Ukrainians, driving a wedge in between Ukraine and Europe, with Ukrainians turning against Europe for having failed to support their pivotal fight for survival. Without exploring this scenario further, historical experience teaches that a combination of defeat and betrayal may spur resentments and political dynamics with unforeseen consequences for Europe's further security.

2.2 The absence of strategy

Western countries have been vague in their expressions of objectives or strategies behind their support for Ukraine. President Joe Biden promised to support Ukraine "as long as it takes" – but was never clear on what "it" meant in this context.[17] It was undoubtedly important for the United States and other NATO countries to avoid being drawn directly into war, so caution was exercised regarding what arms were supplied to Ukraine. As is well known, this stance gradually matured, and allies slowly dared to supply more advanced and powerful weapons. But still, as many observers have pointed out, allies only donated enough to avoid Ukraine losing the war, but never enough to win it.[18] The fear of a Russian nuclear response was obviously a major element behind this cautious approach.

The problem is that in a war of endurance with Russia, Ukraine will lose in the long run, given the size of the two countries. In such a situation, Ukraine will be dependent on Western support as long as Russia has the ability to pose a threat. This is where the West stands today, and it is a poor strategy. The risk of

[15] Carlo Masala, *If Russia Wins*, Atlantic Books, August 2025.
[16] Carlo Masala, *If Russia Wins*, Atlantic Books, August 2025.
[17] Karsten Friis, "Can Trump end the war", *Klassekampen*, 14. November 2024.
[18] Oleksiy Goncharenko, "Western weakness in Ukraine could provoke a far bigger war with Russia", Atlantic Council, April 7 2024,

Western war fatigue also makes it a dangerous strategy. Providing the same resources, but over a shorter period of time, could give Ukraine enough of an advantage for the Kremlin to change its calculations – and make the war end earlier.

President Trump has abandoned the "as long as it takes" position, and halted US military and economic support to Ukraine. Europe must now pay for American weapons supplying Ukraine, and all US civilian support has ceased. Trump launched an attempt at negotiations which, not surprisingly, failed. Poor understanding of the conflict and weak preparations, and amateurish US diplomacy meant that only Putin has benefited from US negotiations attempts thus far. He has been strengthened at home, and in large parts of the world. There is nothing indicating an alteration of this general picture. Trump may now realise that there is no quick political win to himself – but what this entails for the further involvement of the United States, is still uncertain.

At the same time, European leaders have mobilised in a way not seen in recent history. This is probably mostly driven by panic over what Trump might do, and not as part of a strategic plan. After the infamous meeting of Trump and Zelensky at the White House on February 28, 2025, the main European powers provided Ukraine with political support against undue pressure. Various *ad hoc* constellations, such as the E3 (UK, France, Germany), the E5 (+ Italy and Poland), and the "Coalition of the Willing", have been established to coordinate European positions and responses. Both before and after Trump's meeting with Putin in Alaska on August 15, Europe mobilised in order to influence Trump – with mixed success.

The most concrete result has been efforts to establish a military contribution – a security guarantee for Ukraine – which is a prerequisite for Ukraine to negotiate with Russia. Central to Ukraine's needs is a security guarantee that ensures the country's political, economic and cultural survival. The European plan for such a guarantee has become quite detailed. The core objective is to turn the Ukraine armed forces into a "steel porcupine", in other words a deterrent against future Russian aggression in and of itself. But the plans also include monitoring a buffer zone along the front line, sending military instructors to Ukraine, ensuring freedom of movement in the Black Sea, contributing to air defence in western Ukraine – and possibly reopening parts of Ukraine's airspace for civil aviation.

If united and determined, Europe has economic and strategic resources vastly superior to Russia, that in the longer run enables Europe to deter threats from Russia.[19] However, vital to achieve deterrence (which is the purpose of a security guarantee) today, is that the United States is involved, operationally as well as politically. This will have an effect that no European country can match. In our view, the planned Western security guarantee will mean a form of *de facto* integration of Ukraine into the European defence architecture – without the country becoming a NATO member in the near to medium term.

However, for most European countries the security guarantee presupposes a ceasefire or peace agreement, and as of the autumn of 2025 prospects are slim. As long as the Kremlin opposes NATO forces in Ukraine, these plans will in practice only give Putin another motive to continue the war. Thus, the European initiative is left mid-air – similarly to the rest of the negotiation process.

[19] General Ben Hodges, «Lecture – Russia's War Against Ukraine: How Does it End?», *Maastricth University*, October 2025.

2.3 A European strategy?

Despite their longer-term potential for strategic self-reliance, European governments view it as crucial to keep the United States involved, because Ukraine security is at its core also about transatlantic security. Trump wants Europe to assume responsibility for its own security, by increased defence spending and by posturing increased decisiveness. The question is whether Europe can devise a strategy to end the war that does not depend on the United States, but with the United States as an active contributor.[20] The latter is important in order to be able to put sufficient pressure on Russia, and to provide Ukraine with credible security guarantees.[21] In any event, the outcome depends on Europe itself basing any strategy on a foundation of unity and resolve that outlasts Russia's current strategy of attrition.[22]

What could such a European strategy to end the war on sustainable terms, look like?

First, the strategy should not depend upon Putin's approval. It should be a strategy that Ukraine and Europe can achieve in tandem, but with US support. The aim should be to mobilise sufficient military and economic pressure to make Russia realise that it is losing the war of attrition. European investments into Ukraine's survival would thus be of a scale which demonstrate to Putin that Europe is a capable security actor, and which refutes the Russian claim that the continent is weak and decadent. Europe has already shown strength in sanctions – which probably surprised Moscow in 2022. The European strategy should demonstrate political decisiveness, enabling Ukraine to put enough pressure on Russia to make the war cost more than the Russian regime can sustain. This needs to be a key element in what European governments define as a Ukrainian victory.

On the frontline, the Russian occupation forces should be confronted with sufficiently strong resistance to become severely depleted, while simultaneously being forced to tie significant forces into defensive postures. Full liberation of all occupied territories need not be an immediate objective, but Ukrainian capacity to recapture some territory should be enabled, to alter the Kremlin's assertive narrative of progress on the battlefield. This will require Ukraine to be supplied with armoured vehicles, artillery and other equipment needed to strengthen and rebuild the brigades' ability to operate among the frontline's drones and minefields. Europe should make greater investments in the Ukrainian defence industry, combined with continued donation of systems that Ukraine does not produce itself, such as battle tanks, several kinds of missiles, and advanced air defence. The European defence industry should be motivated to produce to meet Ukraine's needs, replacing today's 15 billion euros arms exports to the Middle East.

The Nordic-Baltic countries and Poland, with Norway in the lead, have built the military training facility Camp Jomsborg in south-eastern Poland.[23] The goal is, among other things, to train Ukrainian instructors in order to exchange and transfer skills to their units. This will strengthen Ukraine's and NATO's defence on the eastern flank.

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[20] Karsten Friis, Ed Arnold, Max Bergmann, US and UK Elections: Implications for NATO and Northern European Security, *Nupi Report No 8*, 2024.
[21] Bjørtvedt, Friis and Stormoen, "Europe must take responsibility in Ukraine", *Dagens Næringsliv*, 8 July 2025.
[22] General Ben Hodges, «Lecture – Russia's War Against Ukraine: How Does it End?», *Maastricth University*, October 2025.
[23] Ministry of National Defence. «New training facilities at the Nowa Dęba – Lipa training grounds», *Govt of Poland*. August 22, 2025. Norwegian Armed Forces. "Operation Legio", n.d.

Second, a next further step could be to locate more training to western Ukraine, to facilitate an increase in the volume of trained Ukrainian soldiers and signal strong European commitment. It would require far less travelling for the Ukrainian troops. Similarly, European countries can contribute to air defence in western Ukraine. After Russian border violations in Poland, Estonia and Romania this autumn, Europe can justify assuming air defence roles in the border areas and into Ukraine, while expanding this gradually. Furthermore, Turkey and other allies can more actively contribute to free commercial traffic in the Black Sea. Such initiatives could signal European commitment to Ukraine without engaging in direct conflict with Russian forces, thus reducing the risk of escalation.

Third, the Ukrainian ability to weaken Russian infrastructure should be strengthened. Attacks on Russian oil refineries in the summer and autumn of 2025 has had clear military and economic effects, instigating long petrol queues and lowered military combat capabilities. In the past, some Western countries have expressed scepticism or fear about the consequences of such Ukrainian operations. Therefore, Europe should provide clear political support for such asymmetric projections. They are perhaps Ukraine's most important military card when Russia progresses on the front line.

The fourth pillar of the strategy is sanctions against Russia. The hitherto imposed US and European sanctions have significantly hampered Russia's war fighting efforts and should be enhanced and strengthened. Stronger measures against Russian petroleum exports and their ability to carry out monetary transactions are likely to have the greatest effect. The ban on selling almost 4,000 critical commodity groups to Russia has significantly increased the country's import costs. In the autumn of 2025, the EU imposed new sanctions on shadow tankers and Indian B2B oil customers, while the US sanctioned export giants Lukoil and Rosneft. The sanctions will be crucial in weakening Russia's abilities for military production and warfare.

The purpose of the strategy should be to put pressure on Russia and induce the Kremlin to change its calculations. When the United States does not want to assume strategic leadership, Europe must step up.[24] As we will see below, such a strategy – Scenario 2 – is also far cheaper economically than the alternative of continuing along the current track and letting Russia gradually succeed.



EU Commissioners Ursula von der Leyen (left) and Kaja Kallas (second right) meeting with Nordic leaders Sanna Marin (right) and Ebba Busch (second left) in Finland, 24 Nov 2022. Photo: Government of Finland, CC-BY 2.0.

[24] Karsten Friis, Ed Arnold, Max Bergmann, US and UK Elections: Implications for NATO and Northern European Security, *Nupi Report No 8*, 2024.

3 The scenarios

We study two scenarios to describe possible developments in the war in Ukraine: Russian (partial) victory and Ukrainian (partial) victory. We analyse which factors are most important for the realisation of the scenarios, and present indicators to the development of those factors. Obviously, other scenarios could have been envisaged. For the purpose of highlighting concrete policy options, we chose to limit the analysis to two scenarios – Russian (part) victory or Ukrainian (part) victory – but with a spectrum of outcomes within each. The scenarios are not to be considered strict methodological straitjackets, they are not designed to predict likely outcomes, establish causality, or to be the basis for planning. Rather they are loose analytical frameworks, or perspectives, aimed at guiding policy discussions.[25] Rather than predicting, we shed light on which developments which may contribute to the realisation of each scenario. In Chapter 7 we attempt to quantify the economic consequences of the two scenarios

The starting point is the current situation. The United States has cut its financial support to Ukraine, but still provides some operational support and allows European countries to purchase US equipment via NATO's *Priority Ukraine Requirement List (PURL)* mechanism. Europe is thus increasing its support to Ukraine, but not yet enough to fill the gap left by the United States. If the support remains at the current level, we estimate that the situation will gradually deteriorate and will move towards Scenario 1.

3.1 Scenario 1: Russian (partial) victory

The scenario implies that Russia, fully or partially, achieves its goals behind the war of aggression in Ukraine – either by advancing to the Dnipro River, and/or by continuous bombing of civilians and destruction of civilian infrastructure. Over time this erodes Ukrainian resilience, with the result that Russia gains influence over Ukraine's strategic orientation.

The scenario occurs if Russia increases its currently modest superiority in combat power to a level that allows for faster advance — necessarily with superior armoured mobility and artillery power — and Ukraine does not achieve equivalent access to weaponry and supplies. A ceasefire could provide Russia with partial victory via enforced agreements on Ukrainian nonalignment, disarmament, change of government, an election process that can be influenced, or other political concessions that give the Kremlin decisive influence over the country. In other words, Russia do not need to occupy all of Ukraine to achieve its objectives. It can undermine Ukraine's sovereignty and democratisation though other means.

The end state after a ceasefire in this scenario implies that Russia has destroyed or acquired significant parts of Ukrainian military resources.[26] Ukraine only controls three remaining nuclear power plants, and Russia can forcibly achieve agreement where Ukraine again is becoming dependent on Russian energy. In

[25] For a discussion of how scenario building perspectives can be used in policy-planning processes, see e.g. Iver B. Neumann, Erik F. Øverland, "International Relations and Policy Planning: The Method of Perspectivist Scenario Building", *International Studies Perspectives*, Volume 5, Issue 3, August 2004, Pages 258–277, https://doi.org/10.1111/j.1528-3577.2004.00173.x

[26] General Ben Hodges, «Lecture – Russia's War Against Ukraine: How Does it End?», *Maastricth University*, October 2025. 28:45.

terms of area and population, 50 percent of Ukraine is occupied, and the country has lost parts of its energy and industrial production. In a scenario where Russia succeeds in imposing non-alignment for Ukraine, the remaining Ukraine will either have to accept sustained Russian influence, or incur large military expenses to continually deter Russia from resuming its aggression.

For Europe and Norway, a Russian (partial) victory will mean that Russia frees military resources from warfare in Ukraine, continues its rearmament, and may plan further aggression against countries in the Caucasus, the Baltics, Moldova, or parts of the Nordic region.[27] Ukraine's currently significant military capabilities will either be partially destroyed, acquired by Russa, or politically neutralised from contributing to Europe's defence. Europe will face the risk of armed conflict with Russia, and must establish a credible deterrence and defence of the Baltics, Finland and the Nordic Arctic within 2-4 years. Norway must contribute financially and militarily, and will face increased pressure on its interests in the High North. European deterrence of Russia will have to combine enhanced military, economic, industrial, logistic, and law enforcement capabilities.[28]

In the event of occupation all the way to the Dnipro River, millions of new refugees will also move to Europe. The economic, social, and political costs of such developments will be enormous. It can cause political destabilisation, rise of populism, and social unrest. The risk of further conflict or Russian political interference will increase the country risk premium for foreign investment and Ukrainian borrowing, which will increase the cost of capital and slow down the reconstruction of Ukraine. Russian influence could also impose on Ukraine certain directions in energy and industrial developments, which may reduce the country's rates of economic growth and returns on foreign investment.

In the worst-case version of this scenario, Ukraine will become a "failed state" under Russian influence, with democratic backsliding, corruption and organised crime, migration of youth who see no prospect for the future. Ukrainian political resentment against Europe is also a possible outcome.[29] A less dramatic version will see a 'rest-Ukraine' under constant Russian pressure, dependent upon significant Wester support to stay afloat.

3.2 Scenario 2: Ukrainian (partial) victory

This scenario implies that Ukraine succeeds in denying Russia further expansion and retains the potential to regain parts of the occupied territories. Ukraine have been able to build up its armed forces to such an extent that it can conduct robust counter-offenses and regain initiative at parts of the frontline. This will force Russia to give up on its attempts to occupy more of Ukraine,.

This scenario will increase the chances of Russia engaging in serious peace negotiations, as it recognising it is no longer winning on the battlefield. The scenario could also lead to a historical parallel of the Korean war , where South Korea, with allied support, succeeded in stopping the North Korean war

[27] Carlo Masala, *If Russia Wins*, Atlantic Books, August 2025
[28] General Ben Hodges, «Lecture – Russia's War Against Ukraine: How Does it End?», *Maastricth University*, October 2025.
[29] Carlo Masala, *If Russia Wins*, Atlantic Books, August 2025

of aggression, with a sustainable and lasting ceasefire that enabled favourable economic and political development on the southern side. Ukraine will reach a level of reduced hostilities which allows elections to be held, induces the return of refugees and displaced persons, invites economic investment and development, and commences with EU-integration.

The end state after an end of hostilities must be that Russia lacks abilities for further expansion and experiences a constant risk of Ukrainian offensives to regain more lost territory. This ties up Russian military forces and resources in and around Ukraine and makes Russian aggression against NATO countries less likely. For its part, Ukraine will have built up and further developed a military capacity that is integral in the defence of Europe, and its military industry will contribute to the further deterrence of Russia both in Ukraine and the remainder of Europe. Ukraine will export considerable military competence and equipment to Europe, and attracts more foreign investment, economic development, rapid reconstruction, and the associated return of refugees and displaced persons to a larger part of Ukraine than in the other scenario. Ukraine is offered EU membership and enters into binding defence alliances either through the EU or bilaterally with leading European powers. European forces are being deployed in Ukraine as a manifestation of the will to defend Ukraine against further Russian aggression.

For Europe and Norway, such a Ukrainian (partial) victory will mean that Russia will need more time and resources to pose a real military threat to the west. Europe and Norway will have more time to establish sufficient military deterrence, and significant Ukrainian military capabilities will be included in the overall defence of Europe. A number of refugees in Europe will be able to return to Ukraine and free up financial resources both in the European host countries, and in Ukraine. The reconstruction will not have to take place under constant risk of new physical destruction, and the rule of law may be further developed without Russian interference, which will reduce the cost of capital for investments. Improved growth conditions in Ukraine will increase the return on foreign investment, and together with lower borrowing costs, this will contribute to an increased pace of reconstruction.



Ukrainian forces capturing a Russian T-90M tank in Kursk, Russia, August 2024. Photo: Ministry of Defence of Ukraine. CC.

4 Humanitarian analysis

The conflict in Ukraine has enormous humanitarian consequences with between one and a half, and two million military casualties so far, after three and a half years of intense fighting. The humanitarian costs on the civilian side are also enormous, and the armed conflict has triggered a cascade of negative humanitarian consequences in Ukraine and Europe due to a huge migration wave of refugees from Ukraine. The security threat from Russia, as well as the United States' clear message that Europe must safeguard its own security, including military support to Ukraine, has shifted the focus of European governments towards their own region. Strengthening of European defences is a high priority, which, together with funding needs related to Ukrainian refugees, as well as military and humanitarian support to Ukraine, put European economies under pressure. The US' reduction in global development aid and humanitarian assistance has also resulted in a significant reduction in support for humanitarian efforts in Ukraine. Through the US budget cut, as much as 40 percent of humanitarian projects in Ukraine have been reduced or cancelled. Another result of changed priorities in Europe, and drastic cuts by the US, is that development aid and humanitarian efforts in the rest of the world are significantly reduced.[30] Several European countries have cut their aid and development budgets by up to 50 percent.

4.1 Migration

The humanitarian situation in Europe is likely to be mostly affected by the war in Ukraine and Russia, in the coming years. Until real ceasefire negotiations, it is expected that fighting will continue in Ukraine with a slow Russian advance. The humanitarian support effort will likely be most needed in the oblasts (counties) of Donetsk, Zaporizhia, Dnipropetrovsk, Kharkiv and Sumy. Such a slow advance would result in a corresponding increase in internally displaced persons (IDPs) in Ukraine, but it appears that the flow of refugees towards Europe is lower than expected for 2025.[31] However, there are signs that more countries are considering the possibility of returning some of the Ukrainian refugees on their territories.

In 2025, there will be at least 4.5 million Ukrainian refugees in Europe excluding Russia.[32] There are possibly another 1.3 million refugees in Russia and more than 0.6 million outside Europe, many of them in Turkey. In addition, there are about 3.8 million internally displaced persons in Ukraine as of April 2025.[33] The main recipients of refugees from Ukraine are Germany (1.24 million), Poland (0.99 million) and

[30] International Federation of Red Cross and Red Crescent Societies (IFRC), *Global Plan 2025* (Geneva: IFRC, 2024), 13, https://www.ifrc.org/sites/default/files/2024-12/IFRC_GlobalPlan_2025.pdf
[31] NRK, "Sources to NRK: Saving billions on refugees," *NRK*, May 15, 2025, https://www.nrk.no/nyheter/kilder-til-nrk_-sparer-milliarder-pa-flyktninger-1.17418614
[32] Statista, "Number of Ukrainian refugees recorded in Europe since February 2022, by selected country," updated May 2025, https://www.statista.com/statistics/1312584/ukrainian-refugees-by-country/
[33] The Global Data Institute and the International Organization for Migration (IOM). *Ukraine Displacement Report*. (Geneva: IOM, 2025). https://dtm.iom.int/sites/g/files/tmzbdl1461/files/reports/IOM_UKR_Internal%20Displacement%20Report_GPS%20R20_April%2025.pdf?iframe=true

Czechia (0.37 million). The Baltic states have the highest number of refugees measured in relation to their population.

If support for Ukraine wanes in real terms through the latter part of 2025 and 2026, and Russia sees a significant military advantage, the Russian advance will pick up speed and we would move towards Scenario 1 which would very likely trigger new movements of internally displaced persons in Ukraine, and refugees towards Western Europe. If the Russian advance accelerates and reaches the Dnipro River, it is likely that the current number of IDPs and refugees will double.[34] We estimate that 6 – 11 million new refugees will arrive in Europe, depending on how large an area Russia occupies. Such a migration will create cascading effects with increased humanitarian needs, first and foremost in Ukraine and neighbouring countries, but also in the rest of Europe. Such a wave of migration would most likely overload Europe's current capacity to receive and support refugees, leading to increasing social protests and unrest in Europe. The annual costs of such a wave of migration for Europe will be in the range of EUR 150 – 275 billion,[35] in addition to the costs already incurred to support today's refugees, and in addition to the increase in humanitarian needs including from IDPs in Ukraine. While a further exodus from Ukraine is likely to reduce Ukraine's ability to rebuild after a ceasefire, it will provide other European countries with an influx of migrants, of which there will be highly educated and skilled workers. Experience shows that it takes time to integrate them as net contributors to the national economies.

If, on the other hand, military support to Ukraine is increased and gives Ukraine a military advantage in combat power against Russia under Scenario 2, we are likely to see counteroffensives and recapture of occupied territories. Depending on the extent of Ukrainian advances before a ceasefire, this could lead to the return of up to 1-3 million internally displaced people and up to 1.5 million refugees when ceasefire becomes permanent and Russia is defeated. This could result in a European saving of a total of EUR 40 billion over the first two years, but hardly more in the following years because a disproportionate number of the refugees in Europe derive from the significant Russian-occupied territories, and a full liberation of these areas of refugees' origin seems very unlikely even with the realisation of Scenario 2.

The course of events will depend on many factors, including how large territories are recaptured, and how permanent the refugees consider that reconquest. As of April 2025, 5-10% of those who had fled to Europe had returned to Ukraine, of which 314,000 did not return to their homes, but to a life as internally displaced persons in Ukraine.[36] This shows that the willingness to return home is limited as long as the situation remains unresolved, and we consider it likely, in a conservative estimate, that a reduction in

[34] Our estimate is that 15-30% of today's remaining population will flee Ukraine, i.e. 5.9-10.7 million. In addition, based on experience figures from the Russian-occupied territories, we estimate that 20-40% of the current population east of the Dnipro River, as well as all the IDPs there, will move west of the river. This amounts to 5.4–7.1 million people who will remain internally displaced in Ukraine.

[35] Based on a historical average cost of €25,000 per refugee. In 2024, Germany spent an estimated 10,000 euros per Ukrainian refugee just on unemployment benefits. Chas Pravdy, «Social support for Ukrainian refugees in Germany: Scale, financial payments and future prospects,» *Chas Pravdy,* August 4, 2025, https://chaspravdy.com/en/news/economy-en/2025/08/04/social-support-for-ukrainian-refugees-in-germany-scale-financial-payments-and-future-prospects/. In Nordic high-cost countries, the costs are higher, in Norway the cost of receiving Ukrainian refugees was estimated at NOK 675,800 in the first year in 2023, and then NOK 262,000 annually in the following years. Ny Analyse & SMB Norway, "Report on the employment of Ukrainian refugees: – Norway is doing a poor job," *NTB,* March 15, 2024, https://kommunikasjon.ntb.no/pressemelding/18058404/rapport-om-sysselsettingen-av-ukrainske-flyktninger-norge-gjor-en-for-darlig-jobb?lang=no&publisherId=11898808

[36] The Global Data Institute and the International Organization for Migration (IOM). *Ukraine Displacement Report*. (Geneva: IOM, 2025).
https://dtm.iom.int/sites/g/files/tmzbdl1461/files/reports/IOM_UKR_Internal%20Displacement%20Report_GPS%20R20_April%2025.pdf?iframe=true

European costs of refugees in the short term by EUR 40 billion in the first two years of Scenario 2 is likely. In the event of a peace agreement and Russian defeat, more people may return, but 3 million refugees from Donbass, Crimea and other occupied territories will probably remain in Europe for the time being.

Whatever scenario unfolds in 2026, the humanitarian situation in Ukraine will most likely deteriorate until a ceasefire is signed. If the conflict escalates again, the situation could again deteriorate sharply.

4.2 Health

Disinformation, especially spread via social media, has weakened Ukrainians' trust in public authorities, which has reduced the scope of vaccination. Outbreaks of vaccine-preventable diseases such as measles increased significantly in 2024. Measles cases are expected to continue to rise in Eastern and Southeastern Europe in the coming months due to insufficient vaccination. Based on vaccination coverage and historical trends of reported measles cases in the region, IFRC Europe has identified ten countries with the highest possible risk of a measles epidemic, of which Ukraine is one of them.[37]

The full-scale war has profusely affected health conditions across Ukraine. In October 2024, the World Health Organisation stated:

> " ... 68% of Ukrainians report a deterioration in their health compared to the pre-war period. The most common health problems are mental health problems, with 46% of those affected, followed by mental disorders (41%) and neurological disorders (39%).

This situation has highly likely deteriorated further.

Non-communicable diseases (NCDs) account for 84% of all deaths in Ukraine. The primary barriers to treating NCD patients are the unavailability of services and high medication costs, leaving those with chronic conditions vulnerable to disruptions in treatment and irreversible health deterioration.

The war has intensified health needs, especially in areas such as trauma treatment and rehabilitation. The Ministry of Health estimates that by mid-2024, there had been 100,000 amputations performed due to the war. This may have increased to 150,000 by the end of 2025. The severe shortage of trauma specialists, prostheses and rehabilitation services has further exacerbated the crisis. Healing is often a matter of time but can also be a matter of opportunity. Long-term rehabilitation services for war wounded will be crucial for both physical and mental recovery.[38]

The war in Ukraine also represents a risk to the population due to an increase in epidemic diseases such as cholera, as a result of destroyed water and sanitation infrastructure along the front line. Although most hospitals have additional energy sources, there is still an increased health risk from attacks on energy infrastructure, affecting other health clinics.

[37] International Federation of Red Cross and Red Crescent Societies (IFRC), "IFRC Disaster Response and Preparedness", *IFRC GO* (situation data analysed March 2025), https://go.ifrc.org/
[38] World Health Organization (WHO), "Three Years of War," *WHO*, February 24, 2025, https://www.who.int/europe/news/item/24-02-2025-three-years-of-war-rising-demand-for-mental-health-support-trauma-care-and-rehabilitation

4.3 Protection of civilians

The war in Ukraine also represents a major risk to the civilian population due to an increase in Russian attacks on civilian homes and infrastructure. Since December 2024, Russia has increased its attacks on Ukrainian cities, which has led to an increasing trend in killed and injured civilians, see Figure 1 with UN official figures, below.[39] It is likely that these attacks will continue in strength throughout 2025, but it is uncertain what the trend will be in 2026.

These attacks are also driving an increase in internally displaced people who have limited access to adequate housing, as well as rising rental costs.[40] Together with close to four years of full-scale war, this means that most internally displaced people depleted their savings, and almost 25% of the population was predicted to live in poverty in 2024 - a figure that is likely to increase.[41] It is expected that the number of internally displaced people in Ukraine will increase through 2026, until a possible ceasefire. Such a ceasefire may result in a reduction in the number of internally displaced persons for a period, but in such a scenario, armed conflict may still be expected to possibly resume during the period 2026–2028.

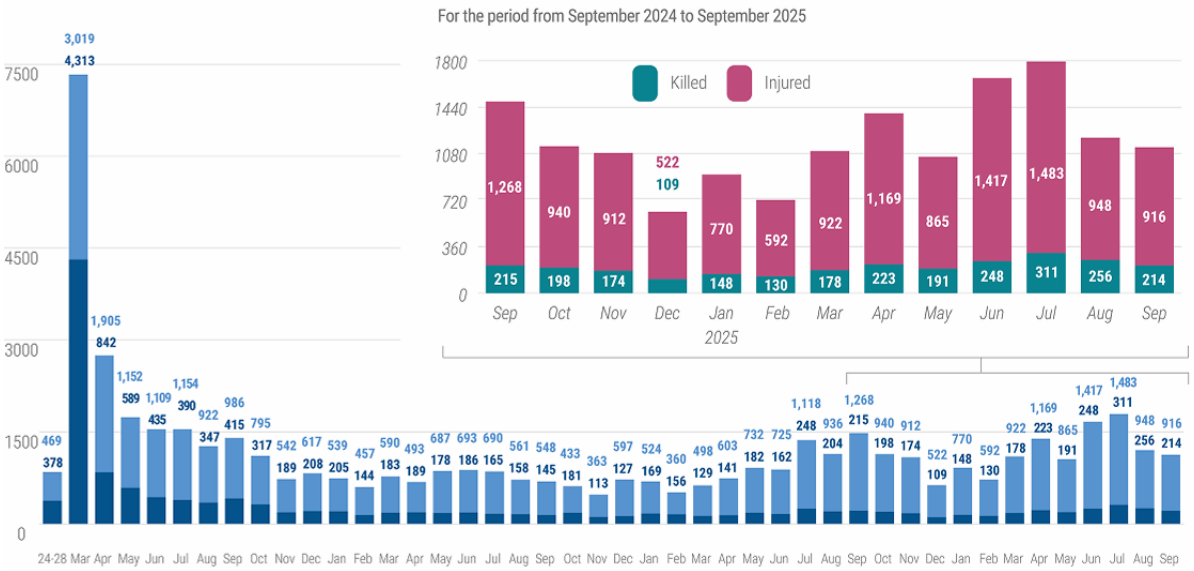


Figure 1: Civilians killed and injured in Ukraine 2022-2025. Source: Office of the UN High Commissioner for Human Rights.

The war in Ukraine also amplifies gender-based violence (GBV) due to inadequate shelter and power outages.[42] Young girls and members of the Roma minority were identified as particularly vulnerable. There is a lack of specialised services, which increases the risk for survivors of gender-based violence.

[39] See also: Office of the United Nations High Commissioner for Human Rights (OHCHR). *Protection of civilians in armed conflict — April 2025*. (Geneva: OHCHR, 2025). https://ukraine.ohchr.org/en/Protection-of-Civilians-in-Armed-Conflict-April-2025
[40] Danish Refugee Council (DRC). «Protection of Civilians Week: spotlight on Ukraine.» *Danish Refugee Council*. May 22, 2025. https://drc.ngo/resources/news/protection-of-civilians-week-spotlight-on-ukraine/
[41] United Nations Regional Information Centre for Western Europe (UNRIC), "2024: UN Humanitarian Forecasts for Ukraine," *UNRIC,* September 11, 2024, https://unric.org/en/2024-un-humanitarian-forecasts-for-ukraine/ https://unric.org/en/2024-un-humanitarian-forecasts-for-ukraine/?utm_source=chatgpt.com
[42] DRC, *Protection of Civilians Week*.

4.4 Other kinds of risk

The EU Commission published a cross-sectoral risk assessment in June 2025, painting a comprehensive picture of current and emerging risks in Europe. Because many of the risks can have cascading effects that can trigger humanitarian needs, we have focused on those risks that have potentially the most immediate health effects. Of the 15 affected sectors, the most relevant (in descending order of the degree of risk associated with them) are: *human health, disruption of essential services, food and water security, psychological and social well-being, displacement and migration,* and *stress in the public health system.*[43] The two main drivers of these risks are geopolitical instability and weak governance.[44]

Disinformation is also a major threat to humanitarian work; it weakens trust in humanitarian organisations and requires countermeasures. We have also seen that respect for international humanitarian law is low on the Russian side. Civilians, who are supposed to be a protected group, are targeted, imprisoned and tortured without trial; and prisoners of war are subjected to systemic torture, malnutrition, and murder. These abuses and violations of international law must be addressed, and targeted efforts should be made to strengthen the emerging apparatus for a post-war judicial settlement.

4.5 Conclusions

The longer the war lasts, the worse the humanitarian situation will develop. With *s* development towards Scenario 1, the economic, social and political costs for both Ukraine and Europe, will be overwhelming. Efforts to realise Scenario 2 are therefore important for both humanitarian and economic reasons. The longer it takes, the greater the already enormous humanitarian costs of the war will be.

Economic costs for Europe from a new flow of refugees and migration from Ukraine if Scenario 1 occurs, are estimated at EUR 150 - 275 billion per year. We must expect this cost to somewhat decline annually, so that the cost will be 524 - 952 billion euros over four years.

This cost will occur, albeit decreasing, until the Ukrainian refugees are integrated and in work. Recent experience from Europe indicates that integration into the labour market takes time, partly due to uncertain economic times in the receiving countries. The Norwegian national budget for 2026 indicates that expenses for the reception and integration of Ukrainian refugees in Norway are significant even three years after the largest wave of migration. Based on our experience in Norway, this means that we must expect that any new annual migration costs will be significant at least four years after the immigration takes place. We must assume that costs associated with this migration will also be incurred after this period. Any socio-economic benefits of Ukrainian educated and skilled refugees will come gradually after they arrive in Europe. The financial burden on national budgets and, not least, the physical and structural burden on Europe's reception systems may entail a major economic and political burden in the event of a new large influx of refugees, which Scenario 1 is likely to trigger.

[43] Azzurra Lentini et al. *Analysis of risks Europe is facing*. (Brussels: European Commission Joint Research Centre, 2025).
[44] Lentini et al., *Analysis of Risks Europe Is Facing*, 78.

5 Military analysis

5.1 Character of the military situation in Ukraine

Warfare in Ukraine is characterised by an evolution from the First World War until today, where two conventional forces are fighting each other. The applied capacities have also been used in previous wars, but four developments can be said to be new in terms of their scope and importance; 1) extensive use of air, land, and sea drones against tactical, operational and strategic targets, 2) extensive electronic warfare to protect own forces and support offensive operations, 3) extensive use of cruise and ballistic missiles against mainly operational and strategic land targets, and 4) the crucial importance of also civilian satellites and satellite communications for command, intelligence and fire control.

The combined arms tactical system is still crucial at the tactical level in land war, from company up through brigade and division level. However, the army corps level also plays a role in creating preconditions for operations. It includes infantry, artillery, tanks, infantry fighting vehicles (IFVs), engineers in diverse forms[45], drones, signals, logistics, etc., which complement each other in terms of capabilities. Volume and breadth are important to avoid gaps in capabilities, while effectiveness is created by tactical expertise and leadership. Neither individual weapons systems nor singular technologies dominate the battlefield, although for example drones in many forms are utilised to supplement other systems.[46] It is *the competence* to utilise different systems in combination, to create synergy, and tactical dilemmas for the enemy, as well as a sufficient *volume* of personnel, weapon systems and ammunition, that is crucial. The extensive use of reconnaissance and attack drones makes camouflage, deception, dispersal and protective nets against drones even more important. The use of drones has increased the risk and lethality of artillery and logistics units far behind the front line. Rapid innovation and learning are central to survival and maintaining combat power. Field fortifications and barricades to protect one's own forces and slow down the enemy's advance are recognisable from previous centuries, but still very important, albeit with some adaptations for protection against drones.

In the land war, tactical and operational support systems at the higher corps and army levels, are still crucial for creating preconditions for operations at these and lower levels. The Ukrainian army has established army corps to command and manage manoeuvre brigades and other support units under its command. In this way, the resources from support units may be more effectively prioritised by the corps staff towards the most critical tasks at any given time. Support units consist of reconnaissance and intelligence, most usually an artillery brigade with both long-range rocket artillery and tube artillery, air defence, engineering resources, logistics, and medical services. Signal units provide communication and

[45] Armoured engineers, combat engineers, and construction engineers.
[46] When one of our travel companions during a visit to a drone factory in Lviv (October 2024) highlighted the importance of drones in the war in Ukraine, he was immediately answered by a representative in the management of the factory: "You must not think that drones alone can win this war. Tanks and artillery are also required, in addition to the infantry, to win the battle." In the further dialogue, it was interesting to note how a civilian, with insight into the characteristics and realities of war through his close cooperation with Ukrainian forces, had captured the essence of tactical cooperation and tactics.

electronic warfare capabilities. On both sides in the war autonomous units for unmanned systems have been established, signalling the extensive scope and importance of such systems in modern war. Particularly important tasks at the corps level are supplies and medical care to maintain combat capability and morale, counter-fire to reduce the effect of enemy artillery, combating enemy reconnaissance and intelligence on the ground and in the air (with drones), as well as supporting lower units with engineering, or leading engineering works. by building new defensive fortifications, etc. A final important task for the corps level is to coordinate efforts with its own air force and long-range drones and cruise missiles, both to facilitate a good effect of air support and to avoid hitting friendly units and aircraft.

Offensives and mobile operations can be led by an army corps, but larger offensives will be commanded by an operational headquarter to focus and coordinate the efforts throughout all domains. A combination of many resources will be a prerequisite for breaking through the enemy's front line, which has proven very challenging, especially with the scale of drones used in addition to space based surveillance to monitor enemy troop movements and attack these up to 100 km behind the contact line.

On the Ukrainian side, brigades and army corps are responsible for the education and training of their own personnel. This being done in sufficient ways is a prerequisite for maintaining combat effectiveness and reducing own losses. Both sides have conducted continuous innovation.[47] Drones or "unmanned aerial vehicles" (UAVs) are pivotal for attacks, protection, and transport of supplies to the front line, as well as medical evacuation. An important prerequisite for innovation is that civilians are strongly involved.[48] In Ukraine, private companies have developed prototypes in close collaboration with brigades, often with NGOs such as *Come Back Alive* or *Dignitas* as critical and effective liaisons. The positive aspect of this has been autonomy at brigade levels, and frequently improved weapons.

The disadvantage is that many players are involved, with little standardisation and integration of weapons systems. Military contributions from allied countries to Ukraine have long suffered under the same challenge. The bottom-up approach has made it difficult to standardise equipment across brigades up to corps and army level. This dilemma will remain when Western defence industries cooperate with Ukrainian partners. A mitigating measure has been the establishment of *Unmanned Systems Forces* in the Armed Forces of Ukraine, which may have overall control of the training, equipment, and combat efforts of such systems. But this is challenging to organise, as each brigade is still responsible for acquiring its own "first person view" (FPV) drones.

The war has shown that as long as the parties manage to maintain a base of air defence, neither side is able to establish complete air supremacy. However, Russia has the ability to deliver a significant number of glide bombs as close air support and battlefield interdiction, giving it a slight advantage of air superiority. Russian forces have ordered 75,000 glide bombs in 2025, and have used at least 100 per day, with high effect against Ukrainian forces.[49] Together with long-range reconnaissance drones, large numbers of FPV drones and Russian artillery superiority, this has given them sufficient fire superiority to push slowly forward in prioritised sections of the frontline.

[47] Karlsrud, Stormoen and Svendsen, *Tempo and effectiveness in Norway's support to Ukraine*, NUPI, 6 May 2025.
[48] Karlsrud, Stormoen and Svendsen, *Pace and effectiveness of Norway's support to Ukraine*, NUPI, 6 May 2025
[49] Sam Cranny-Evans, "Blood and Dust: The Rise of Russia's Glide Bombs," *European Security & Defence*. July 15, 2025. https://euro-sd.com/2025/07/articles/armament/45382/blood-and-dust-the-rise-of-russias-glide-bombs/

Quite surprisingly, through the combined use of sea drones and missiles, Ukraine has managed to force the Russian Black Sea Fleet off its coasts and back to Russian harbours to seek protection. This can be said to be a significant trend shift compared to previous wars, where large surface naval forces have been able to dominate the seas and coastal areas. This has affected the land war in that the Russian Black Sea Fleet no longer poses a major threat of landing Russian land forces on Ukraine's flank and rear space between the city of Mykolaiv and Romania. Developing trends suggest that underwater drones can play a significant role in both surveillance and attacks, which may develop new concepts for sea denial.

A striking feature of the war is how operational and strategic targets in the depth of enemy territory are attacked with quantities of long-range drones and cruise and ballistic/hypersonic missiles. These have replaced the long-range bombing campaigns of previous wars, primarily from a cost/benefit perspective. The full effect is difficult to assess, but it is clear that such attacks have had significant effects on the parties' abilities to continue the war. In the summer of 2025, Ukraine launched an extensive campaign against Russia's refineries and other infrastructure. In November 2025, there are many indications that this will hurt Russia's economy and ability to keep both its civil society and military operations going.

Finally, there is a trend shift in warfare that a civilian communications provider (and not an exclusively military system) - *Starlink,* which via *SpaceX* is owned by Elon Musk- has had a decisive influence on the outcome of operations. Starlink's capabilities may have saved Ukraine's defensive struggle when Starlink was made available shortly after February 2022. Ukrainian command and control were severely weakened after initial Russian air and missile attacks and Russian electronic warfare also weakened Ukraine's ability to lead a coordinated campaign. Although Russian attacks on Starlink have resulted in variable access to the service, there is little doubt that it has been very important for Ukraine's ability to command operations.

A partial conclusion based on this review is that Ukraine needs the full breadth of capabilities to succeed in the war. They need financial support to be able to utilise their own production capacity for military weapons systems. However, they also need substantial deliveries of materiel where they lack the right capabilities, or sufficient capacity for production or standardisation.

5.2 Tactics of the land war

The Russian and Ukrainian tactics of the land war are significantly different. Russia uses poorly trained forces in formations of about 10 men in the first wave, to attract fire from Ukrainian positions and identify them before deploying more or better forces to defeat those positions. They maintain a high pace of attack with battalions and regiments of approx. 300-1,000 personnel when forces are fresh , and exchange these to reconstitute units[50] They may also launch attacks with up to 30 soldiers, supported by one or two tanks or IFVs. The Ukrainian positions are then shelled with artillery, and attacked with FPV drones, and glide bombs. When they have managed to disrupt and break up Ukrainian positions, or if

[50] Jack Watling and Nick Reynolds, *Tactical Developments in the Third Year of the Russo-Ukrainian War.* (London: RUSI, 2025), 8. https://static.rusi.org/tactical-developments-third-year-russo-ukrainian-war-february-2205.pdf

Ukrainans conduct force rotations, Russians launch prepared attacks. Russia also apply infiltration tactics to a large extent with a handful of soldiers in small groups. These trickle through the porous Ukrainian line to disrupt, isolate and weaken Ukrainian positions to make them untenable and force withdrawal.

The constant use of artillery and FPV drones to keep Ukrainians in positions and prevent regroupings and counterattacks, , and glide bombs to knock out identified bunkers and urban positions, makes it very difficult for the Ukrainian forces to hold their positions if Russians deploy a combined arms unit. The Ukrainian forces are therefore trying to predict where the Russian forces will attack and lay anti-personnel and anti-tank mines to slow down the Russian forces and at the same time prepare fires against their axes of advance with available weapons – FPV drones, artillery, and combat vehicles including available battle tanks and IFVs.[51]

In order to reduce their own losses as much as possible, especially losses of infantry soldiers who hold the front line and are most vulnerable, the parties construct deep trenches and bunkers. They cover these with nets against drones in addition to utilise camouflage and dummy positions to deceive the enemy into attacking empty positions. Ukrainians also stretch their defensive positions over several kilometres in depth, in addition to engaging the attackers with various weapon systems up to 10-15 km in front of the line of contact.[52] "All Ukrainian units use a mix of reconnaissance and attack drones, from light and heavy bomber drones to FPVs. Most brigades have their own UAV company or battalion, and dedicated UAV units are allocated to support 40 to 70 kilometres of the frontline."[53] Many independent units have their own drone teams at even lower levels, down to each company, in order to not depend on support from higher units.[54]

Since Ukrainian forces do not yet have as large volumes of wired FPVs as Russians have, they are far more dependent on radio-controlled FPVs that can be jammed. In order to be able to use these, the Ukrainians must shut down their own jamming measures and disrupt the Russian jamming measures with artillery attacks, in order to force the Russians to move their jamming equipment. In general, attack drones rely on reconnaissance drones to find and identify targets.[55]

Tactical UAVs have significant limitations, only 20-40% of Ukrainian FPVs reach their target. Russian jamming measures and long periods of rain, fog, snow and wind often prevent the use of FPV drones, and drones that hit armoured vehicles are often unable to destroy them, therefore needing several FPV drones to first immobilise and later destroy armoured vehicles.. However, FPVs are effective against infantry, and Ukrainian attack drones are still very important as they account for 60-70% of the losses of Russian equipment.[56] An important reason for this high proportion is that the Ukrainian forces have less artillery and access to ammunition than the Russians have.[57] Many Ukrainian officers mention that they are in need of more artillery as this has many advantages compared to UAVs and complements these systems. Artillery can reduce the effect of Russian jamming (EK), force the Russians to move their air defences or keep it suppressed so that it becomes possible for Ukrainian forces to use larger drones and

[51] Watling and Reynolds, *Tactical Developments in the Third Year of the Russo-Ukrainian War*, 8-9.
[52] Watling and Reynolds, *Tactical Developments in the Third Year of the Russo-Ukrainian War*, 8–13.
[53] Watling and Reynolds, *Tactical Developments in the Third Year of the Russo-Ukrainian War*, 10.
[54] Conversations with GUR combat unit officers in Kyiv, September 2025.
[55] Watling and Reynolds, *Tactical Developments in the Third Year of the Russo-Ukrainian War*, 10.
[56] Watling and Reynolds, *Tactical Developments in the Third Year of the Russo-Ukrainian War*, 10.
[57] Watling and Reynolds, *Tactical Developments in the Third Year of the Russo-Ukrainian War*, September 11, 1944.

aircraft. When UAVs and artillery work together, it often increases the destructive effect of both systems significantly, beyond using the systems separately. For example, an FPV can damage a vehicle while the artillery targets escaping personnel. Artillery can be used during variable weather when FPVs are unable to fly, although it also requires target observation, and it responds faster than drones. With the right ammunition[58], artillery can effectively destroy armoured vehicles that are stationary.

In addition to drones and artillery, Ukrainians also use tanks and IFVs to stop Russian attacks and knock out Russian positions. They are often hidden in well-camouflaged positions up to 3 km behind the front, to be called out quickly and fire at Russian attackers if necessary. Depending on availability, all Ukrainian brigades try to keep a company or battalion of tanks (10-30 tanks) for such missions, as well as for counterattacks.[59] In addition to the fact that armoured combat vehicles can have a relatively short response time if they are on standby, they can also operate under all weather conditions. Modern Western combat vehicles in particular have very good abilities to operate and fire effectively even in the dark, and under conditions of poor visibility.

It is important to emphasise that Ukraine must be supported with all types of weapons systems so that they can develop complete combined arms systems and switch a personnel quality advantage into superior combat power.[60] Although drone technology will remain an important part of Ukraine's (and the Russian) arsenal, it is important to provide them with the prerequisites for a complete combined arms system. It is just as important as fielding a full soccer team with all roles and types of specialists when playing in the Champions League. One falls short when some of the specialists are missing, be it strikers, wingers, midfielders, defence or the goalkeeper. A complete team is needed to win, and they must be the best trained and have the best skills. The same applies to the Ukrainian armed forces.

There is a rapidly increasing production of small drones on both sides, where Russia has so far been able to scale up its production to about twice that of Ukraine. However, Ukraine claims that it can double its production and produce at least 5 million drones with sufficient European funding. However, it is also likely required to implement a higher level of standardisation in production to achieve this. Besides funding for its drone production, Ukraine also needs funding to utilise the production capacity of the other parts of its defence industry.

5.3 Military factors for the outcomes of war

The purpose of war is political gain, military strategy and operations will be directed to achieve this. While one can be successful in a series of tactical battles and seek to destroy as large a portion of the enemy's forces as possible in one operation, one can no longer destroy the enemy's entire army in one battle. Military leaders will plan and execute operations so that a series of tactical battles can be exploited to

[58] For example, with BONUS grenades that hit the target automatically as long as they are fired in the right area, as well as with "cargo grenades" that release many explosive charges that can hit through the roof and engine covers on armored vehicles.
[59] Watling and Reynolds, *Tactical Developments in the Third Year of the Russo-Ukrainian War*, 9 July 1944.
[60] Jack Watling, *Emergent approaches to combined arms manoeuvre in Ukraine.* (London: Royal United Services Institute (RUSI), 2025). https://www.rusi.org/explore-our-research/publications/insights-papers/emergent-approaches-combined-arms-manoeuvre-ukraine

achieve strategic objectives. After Russia failed with a strategic coup in 2022, we now see that the war is about depleting the opponent's forces and ability to continue the war, as well as to take or defend key terrain and infrastructure. In order to predict how the war might develop into realising the scenarios, it is necessary to analyse the factor that can best explain how the sum of the tactical battles will develop.

Among military factors, combat power determines the outcome of battles. Superior combat power brings tactical success. Potential combat power consists of two main categories of elements: *Force Strength,* which is the sum of personnel and the lethality / firepower of armament systems; and *Combat Effectiveness,* which is the effect of qualitative factors, or *combined arms* and *logistics*. The qualitative factors include training standards, leadership abilities, morale, etc. Potential combat power is affected by operational factors such as terrain, weather, road and ground conditions, etc.[61] *Potential combat power is an additive quantity, while combat effectiveness is a multiplicative quantity:* two equally large forces equipped identically, may have different combat power depending on their standard of training and the quality of leadership.[62] Combat power can be summed up at several levels, from battalion (500-1,000 personnel on each side), to front section level (up to 1-2 million personnel on each side).

Subject to inaccurate and false casualty figures, estimates from the war in Ukraine indicate that Ukrainian army forces have a combat effectiveness relative to the Russian forces at a level between 1.1 and 1.2. The fact that the difference is so marginal, means that it is relevant and necessary to analyse developments in weapon systems available to Russia and Ukraine in order to predict the development of *potential strength* and *combat power*. We can then predict the development of military operations and the outcome of the war.[63] This will help us to estimate what Ukraine needs to settle the war in its favor.

The armament systems that each constitute the largest concentration of potential strength among land forces are, respectively, *battle tanks* and *artillery*. Although these weapons are part of a system of combined arms systems in combination with air defence, drones, and other weaponry, they constitute a core around which such an integrated system is built. Not least, the availability of tanks and associated armoured engineering capabilities will be a prerequisite for success in breakthrough operations that can yield significant progress and losses to the enemy. An assessment of developments in production capacity for these systems in the Russian defence industry may provide us with a basis for predicting development trends for the combat power of Russian land forces.

Ukrainian drone expertise has slowed, but not stopped, a gradual Russian advance.[64] It is *the sum* of the weapon systems and the parties' expertise to exploit these with synergy effects in a combined arms system which determines their combat power. Although Russian tactics have changed on several fronts, with the main emphasis on drone-supported infiltration attacks, artillery and battle tanks will still be a vital core to develop combat power for larger, offensive operations. Such operations will be decisive for whether or not Ukraine can carry out counteroffensives and re-conquer occupied territory.

[61] Appendix A shows a model with underlying factors for calculating combat power.
[62] Trevor N. Dupuy, *Understanding War: History and Theory of Combat* (Nova Publications, 1987), 81–123; Trevor N. Dupuy, *Numbers, Predictions, and War: Using History to Evaluate Combat Factors and Predict the Outcome of Battles* (Bobbs-Merrill, 1979), 40–117.
[63] A key premise for the analysis is that even if it will be painful, both Russia and Ukraine will be able to mobilize sufficient soldiers as long as they have sufficient materiel to equip them with, in other words, production capacity and available materiel are most crucial for the development of combat power, and not personnel. We believe that this assumption is valid within the time horizon we want to analyse, i.e. from mid-2025 until the end of the year 2026.
[64] Justin Bronk, *NATO Should Not Replace Traditional Firepower with 'Drones'* (London: RUSI, 2025).

We will therefore analyse developments in the stock of Russian battle tanks as an indicator of changes in available Russian combat power for the land battle, and to be able to assess what Ukraine needs in terms of such armament systems for counter-offensives.

Air forces and air defence are important systems in this war, too. Although Ukraine has so far not had sufficient land-based air defences to fully protect its ground forces against Russia's air-delivered glide bombs, and these have some significance for Russian progress and destruction of Ukraine's land forces, deliveries of F-16s have contributed somewhat to reducing Russia's advantage in the air. Expected deliveries of the Mirage 2000 fighter aircraft will help further balance the situation, and we cannot foresee that either party will be able to claim decisive air superiority during the next year. *We have therefore chosen not to consider further the development or balance of air forces. However, it is important for Ukraine to receive more support to build up its air defences and ensure that they can intercept Russia's air strikes, as well as help defend against missiles and drones.*

Strategic missile and drone units affect the conflict politically and economically, more than they affect the military balance. They are utilised by the Russians for attacks against critical infrastructure, and long-range drones are also used for terror attacks against civilians. These attacks have increased drastically since February 2025 and are intended to break down Ukraine's ability and willingness to continue the fight. Many civilians have been killed in the attacks, and such losses will always be terrible for all affected. In the short term, the psychological terror effect of these attacks is probably more vital to Ukraine's political will to continue the fight, than to the attrition of military capabilities. However, if Ukraine's air defences run out of missiles that protect against Russian ballistic missiles, and reduce the devastating effect of attacks, it may eventually have a significant effect on Ukraine's industrial capacity and thus indirectly on its military ability to continue the fight.

Ukraine's attack on Russian oil installations is hitting the Russian economy and ability to keep essential public services and military operations running. This has become an increasingly vital component in Ukraine's asymmetric warfare, against targets far behind the front line. An intensification of these campaigns, for example with US Tomahawk missiles or self-produced systems, will be important both strategically to hit the Russian economy, and tactically to curb Russia's ability to supply the front with fuel.

It is important for the outcome of the war that Ukraine receives more supplies of arms that can protect against Russian drone and missile attacks, while at the same time receiving support to create and develop its own systems, in order to hit Russia's war-important infrastructure and war economy. General

5.4 Combat power development of Russian forces

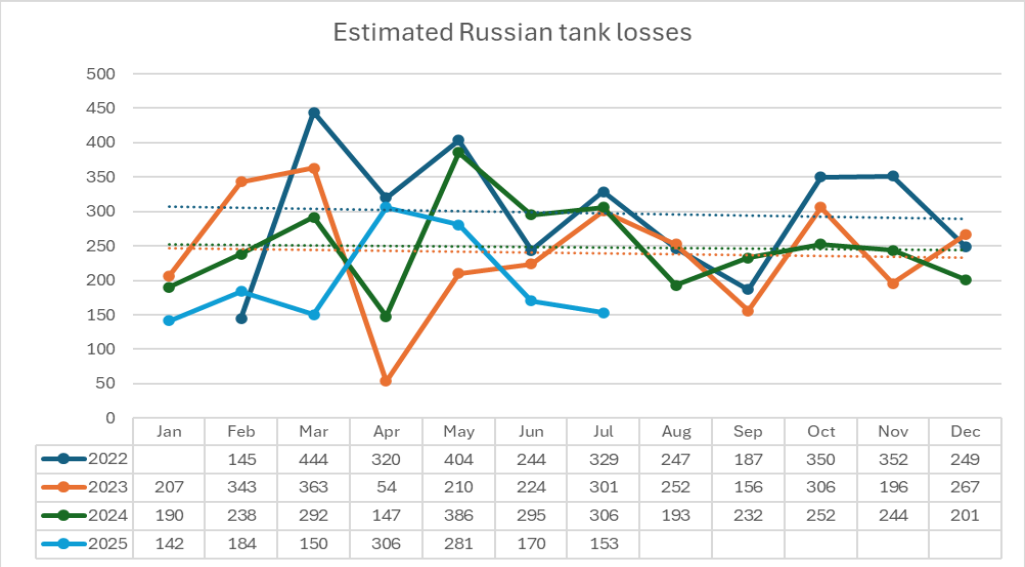
Analysts' views on the Russian stocks and supplies of armaments and arms systems have emerged during the war as new techniques of intelligence gather paces and registration of losses including by satellite imagery have developed. Until 2025, the predominant view was that Russia has sufficient resources to sustain the war for long, via substantial and proven expansions of its military industry. In a fresh report, however, analysts record significant reductions in Russia's production of key weaponry,

including artillery and battle tanks, partly due to the chilling effects of sanctions on vital inputs.[65] In this section, we will conduct a deeper examination of Russia's stockpiles and supplies of the model systems.

In order to assess the development in the combat power of Russian land forces, we need to estimate their stocks at the start of the war, losses on the battlefield, supply from the production of new materiel, and overhaul of long-term stored materiel. As discussed above, we chose to focus on battle tanks. To further indicate the study's validity, we also estimated Russian losses of IFVs and armoured personnel carriers[66] and artillery units. This estimate showed a sufficient correlation with our estimate for battle tanks, to support our confidence in the estimates, as this is as expected according to empirical statistical data. The estimates are conservative in order to ensure that we do not overestimate the Russian losses.

For details, see Figures 2-7 in this section, below.

We consult reliable sources for equipment inventories in 2022. Then we estimate battlefield losses by adjusting verified losses from independent open sources, against empirical data from previous wars, to compensate for likely losses that have not been verified. Finally, we compare results with Russian losses communicated by the General Staff of Ukraine.[67] This comparison has only been possible for certain periods for battle tanks as data for some periods are unavailable. The General Staff's data for Russian artillery losses include weapons that are not comparable to ours, therefore not possible to compare.[68] The correlation between the reported casualty figures from the General Staff and our estimates for 2024, strongly indicates valid casualty figures, yielding that our estimates are even systematically somewhat low. The correlation for 2025 is somewhat less pronounced but still indicates valid estimates.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022		145	444	320	404	244	329	247	187	350	352	249
2023	207	343	363	54	210	224	301	252	156	306	196	267
2024	190	238	292	147	386	295	306	193	232	252	244	201
2025	142	184	150	306	281	170	153					

Figure 2: Russian estimated total losses of battle tanks - verified losses adjusted upwards against empirical statistical values. An advancing attacker may salvage and repair 50% of losses, while a retreating defender may salvage and repair 30%.

What is relevant for our analysis is the figure for monthly average non-repairable battle tank losses, which we compare to estimates of Russian production capacity. This allows us to predict the development of the

[65] *EuroMaidan Press*, «Frontline Report: Tank production in crisis as Russia's war economy hits the wall», 18 November 2025.
[66] Assault armoured personnel carriers (IFV) and transport armoured personnel carriers (APC).
[67] See Appendix B: *Estimate of Russian losses of land materiel in the war in Ukraine 2022-2025*.
[68] Probably bomb launchers and possibly other materiel as well.

Russian inventory of operational battle tanks, given that their military offensives continue with roughly the same intensity and use of resources. If we assume that Russia has predominantly been on the offensive during all war years seen as a whole, and may repair half of their losses, the average monthly loss of unrepairable battle tanks is 125 for all the war years.[69] Our estimate is that Russia from February 2022 through July 2025 lost 10,600 battle tanks, of which 5,300 were non-repairable. Ukraine's General Staff reports a loss of 10,839 Russian tanks for the same period.

However, we see a significant downward trend in Russian losses of battle tanks and IFVs and armoured personnel carriers through the latter half of 2024, aa well as through 2025.[70] This may indicate several trend shifts, or a combination of these; such as changes in availability, changed tactics, or changed priorities among equipment types. We saw a significant increase in daily Russian personnel losses in 2024, but with a decrease in 2025.[71]

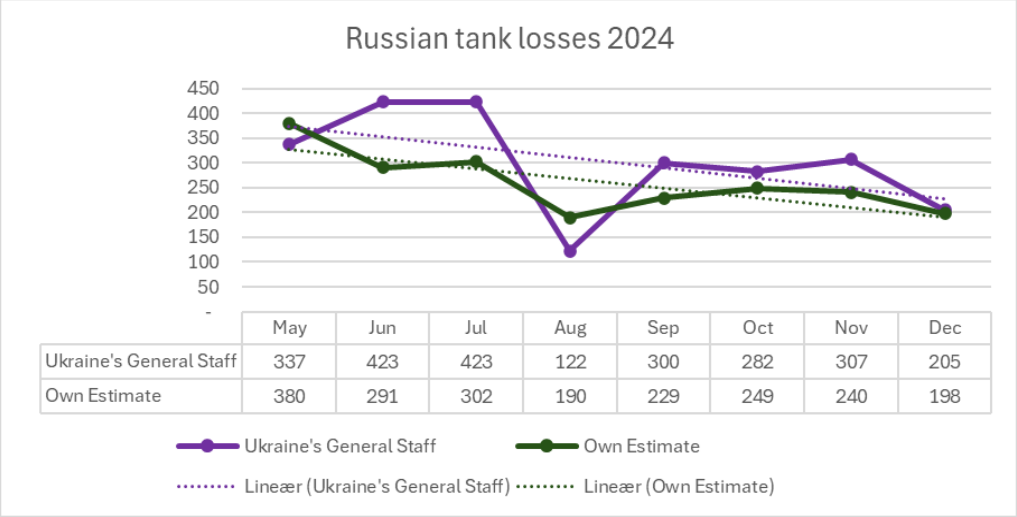


Figure 3: Equipment loss estimates for 2024, against data published by the General Staff og Ukraine.

Empirically, battle tank losses are a function of personnel losses.[72] As we did not see this for 2024, in addition having expected higher battle tank losses in 2024 and 2025, we assume that the Russian infiltration attacks with mainly infantry and lower effort with armoured vehicles, explain part of the change. The build-up of new units in Russia[73] for a possible conflict with NATO in the Baltics and on the Kola Peninsula and the North Calotte[74] may also explain the fact that fewer battle tanks are deployed at the front, but we are probably seeing a combination of these two factors, together with a slight decline in available materiel.

[69] February 2022–present. July 2025.
[70] Forward empty. July 2025.
[71] Ministry of Defence [@DefenceHQ], «Latest Defence Intelligence update on the situation in Ukraine – 5 August 2025,» *Twitter (X),* 5 August 2025, https://x.com/DefenceHQ/status/1952652176704111038
[72] Trevor N. Dupuy, *Attrition: Forecasting Battle Casualties and Equipment Losses in Modern War* (NOVA Publications, 1995), 78–90
[73] Estonian Foreign Intelligence Service, *Russia's armed forces are expanding.* (Estonia: Estonian Foreign Intelligence Service, 2024), https://raport.valisluureamet.ee/2025/upload/vla_eng-raport_2025_WEB_1-1.pdf
[74] Yury Fedorov. *Russian Military Manpower After Two and a Half Years of War in Ukraine.* (Paris: IFRI, November 2024). https://www.ifri.org/sites/default/files/2024-11/ifri_fedorov_russian_military_manpower_rer48_nov2024.pdf

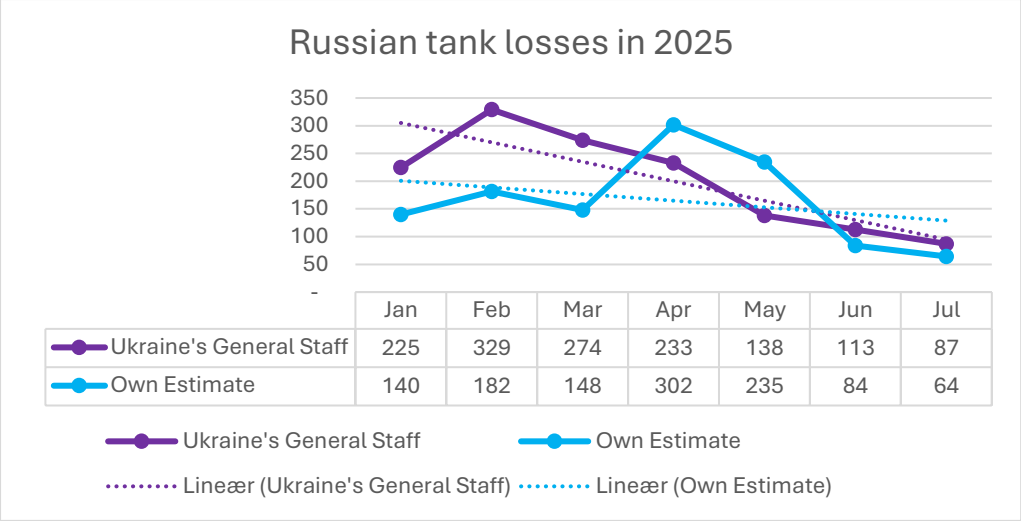


Figure 4: Equipment loss estimates for 2025, against data published by the General Staff og Ukraine.

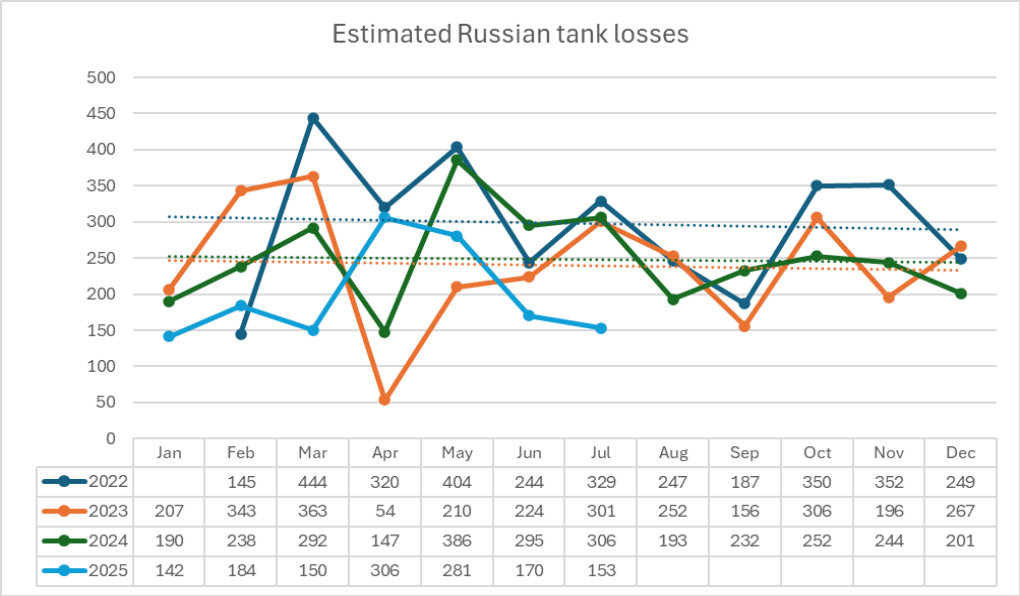


Figure 5: Monthly Russian loss of battle tanks, our estimates for the period 2022 - 2025.

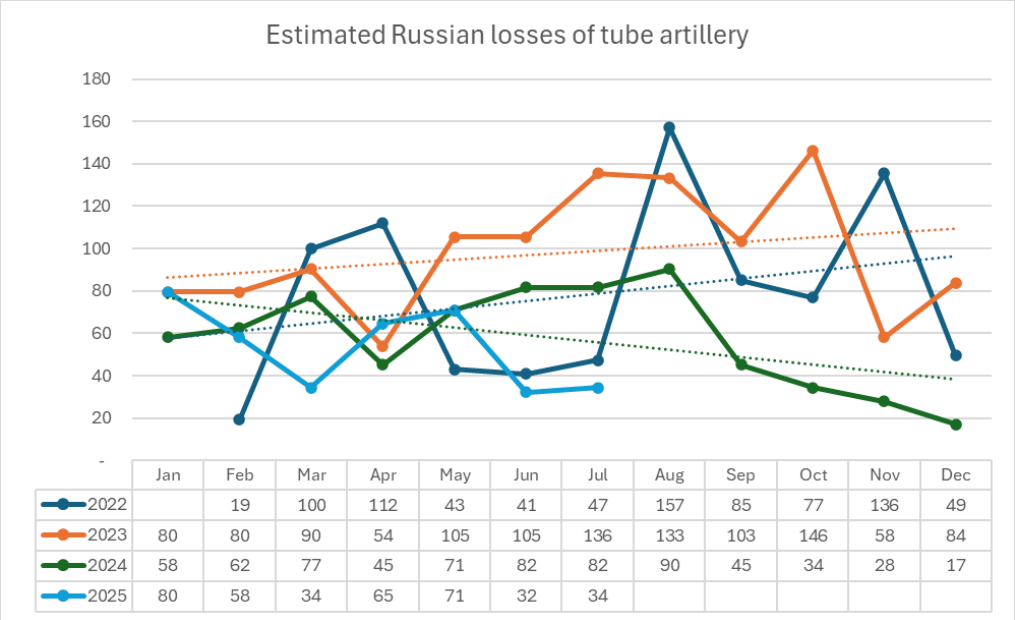


Figure 6: Monthly average Russian personnel losses. Source: The UK Ministry of Defence, Intelligence updates.

Regardless of the exact combination of losses between battle tanks and armoured vehicles, we can expect a trend of downward losses until Russia again deploy substantial armoured reserves in battle. Such efforts will either take place to achieve or exploit a breakthrough against the Ukrainian defences, or to counterattack against a potential Ukrainian offensive. The average future monthly Russian battle tank losses should therefore be set lower than the average for the entire war, in order to validly predict developments in Russian combat power. Average Russian monthly, unrepairable battle tank losses[75] between May 2024 and September 2025, are 117 according to Ukraine's General Staff,[76] while the average between January and September 2025 is 87.

We estimate average Russian battle tank losses for 2025 at 100 battle tanks per month in our further analysis. Projecting losses through 2025, we arrive at Russian losses of 5,800 non-repairable battle tanks from February 2022 to December 2025.

We have chosen to follow the same methodology in our estimations of Russian losses of tube artillery.[77] However, we have adjusted for artillery units captured, since verified losses of these are lower, and vary less, than for battle tanks. This is as expected. as artillery is placed several kilometres behind the frontline and may usually be rescued significantly easier and with less risk to personnel. We estimate a total of 2,889 artillery systems irreparably lost, at a monthly average of 37 for all full-scale war years. As for battle tanks, however, our estimates again reveal a downward loss trend in 2024 and 2025 (Figure 7).



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022		19	100	112	43	41	47	157	85	77	136	49
2023	80	80	90	54	105	105	136	133	103	146	58	84
2024	58	62	77	45	71	82	82	90	45	34	28	17
2025	80	58	34	65	71	32	34					

Figure 7: Monthly Russian tube artillery loss, our estimates with a downward trends in late 2024 and in 2025.

[75] Ministry of Defence of Ukraine, «News on Enemy Losses and Combat Operations in Ukraine,» *Ministry of Defence of Ukraine*, October 3, 2025, https://mod.gov.ua/en/news/tag-combat

[76] The figures have been adjusted down by 50% from total losses to non-repairable losses.

[77] Rocket artillery is obviously also an important capacity, but we have not had sufficient data to assess production and maintenance capacity to find it appropriate to include in this analysis. The Ukrainian General Staff states a total Russian loss of such at 1514 from the start of the war up to October 3, 2025.

5.5 Analysis of Russian war materiel supplies

We will now combine the above analyses of irreparable losses of battle tanks, with estimates of Russian production capabilities. We base this estimate on international sources and calculations from reputed experts, combined with our projections for the development of the Russian economy (Chapter 6) and access to raw materials. This will be included with the loss figures to determine Russian equipment stocks in 2025 and 2026, in order to assess what equipment level (potential force) Ukraine must exceed in order to convert its combat effectiveness into superior combat strength and regain occupied territory.

Russia's defence industry is almost entirely dominated by state-owned enterprises, many within the Rostec conglomerate. The state-owned, traditionally civilian companies Rosatom and Roscosmos, also increasingly serve military purposes, including within nuclear armament. Almaz-Antey specialises in air defence, while many relatively large niche manufacturers formally, or through alliances, sort under the Rostec group. Studies by the *Kyiv School of Economics* of more than 6,700 companies reveal that Russia's military-industrial complex is highly centralised, where the companies are part of just above 600 clusters that depend on a limited number of state-owned companies.[78]

Russia is self-sufficient in armaments, although reliant of imports of critical components for production. The industry has a large capacity but is relatively cumbersome with presumed significant corruption and other inefficiencies. It is believed that a lot of production equipment is worn down and that this problem may be increasing due to the sanctions.[79] Manufacturing is likely to have high capacity utilisation, limited primarily by the supply of imports, and labour shortages. Annually, Russia probably produces 3-4 million light drones and up to 10,000 strategic drones.[80]

Future Russian production capacity follows, among other sources, by studying Russian nominal imports (in current dollar value) of key input goods for arms production which Russia must import. We have studied six so-called "dual-use" imports that are crucial in arms production, by comparing Russian import data with trading partners' export data from UN ComTrade and national sources.[81] Imports of the six commodities (Figure 8) amount to about USD 5 billion annually, and fell by up to 15% in nominal terms from 2023 to 2024. This frames the potential armament production. With Russia's fiscal and military industry challenges in 2025, we conservatively estimate that this supply of raw materials will nominally fall by 5% in 2025, and by 10% in 2026. These are nominal and do not take into account the rise in prices for imports of sanctioned goods. Estimates for these price hikes are demanding, but studies from *Corisk* show that total cost of imports (freight, etc.) has increased from 4 percent to 11 percent of all imports, without factoring in an additional increase in prices through third-country intermediaries.[82] It is therefore likely that the real decline in imports of the studied intermediate goods has been noticeably higher.

[78] Kyiv School of Economics (KSE Institute), *Russia's military industry relies on 692 geographic clusters – KSE Institute Report*. (Kyiv: Kyiv School of Economics, 2025).
[79] Unpublished presentation from *the Economic Security Council of Ukraine* at the European Commission's RELEX meeting for member states, Warsaw, April 10, 2025.
[80] David Axe, "4.5 Million Drones Is A Lot Of Drones. It's Ukraine's New Production Target For 2025,» *Forbes,* March 12, 2025,
[81] Metal tools (HS 8461), machine centres (HS 8457), valves etc (HS 8481), ball bearings (HS 8482), shafts and gears (HS 8483), and measuring instruments (HS 9031). Source: Russian customs data.
[82] Erlend Bollman Bjørtvedt. *Russia's foreign trade and trade costs 2019–2024*. (Oslo: Corisk, 2024).

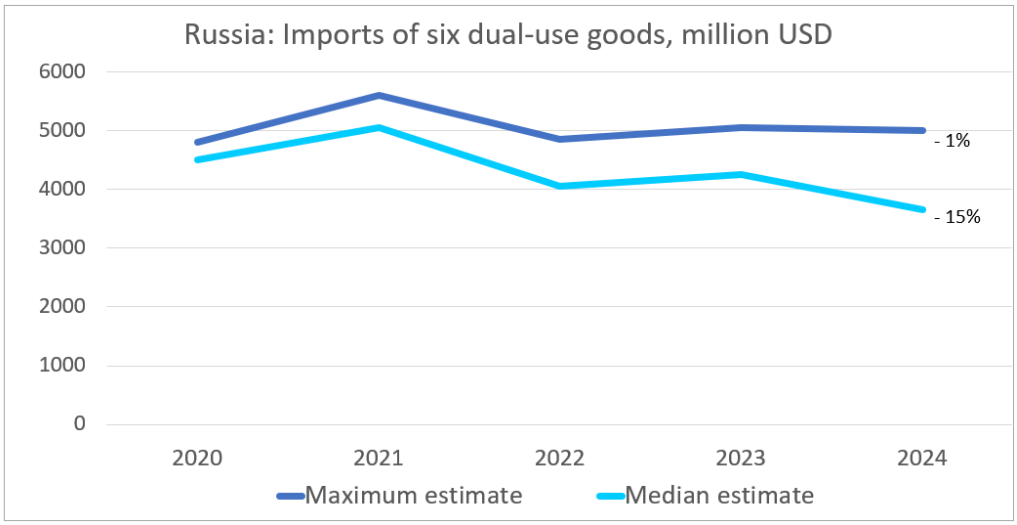


Figure 8: Russian imports of some key components for arms production. Around 80% of component inputs to the Russian arms production are imported. For some categories, import prices have increased by 550-600%. Real import volumes have therefore decreased more than these imports measured in current values imply. From 2023 to 2024, the highest estimate (dark blue) sees a decrease by 1%, while the median estimate (pale blue) implies decrease by 15%.

Based on the same sources, we have studied four critical raw materials for arms production, which Russia must import (Figure 9).[83] We see a nominal reduction of imports of just over 20% in 2024, with an assumed even greater reduction measured in real value. There is reduced imports for all the four raw materials. Russia is unable to produce refined chromium, which is a necessary alloy for gun barrels in battle tanks and tube artillery, and according to available data, these imports were probably halved from 2022 to 2024 - an indication of a possible reduction in the production of battle tanks and tube artillery. The picture is similar for a number of other imports that Russia does not produce itself. With the exception of cars and trucks, there was a decline in almost all critical Russian imports in 2024.

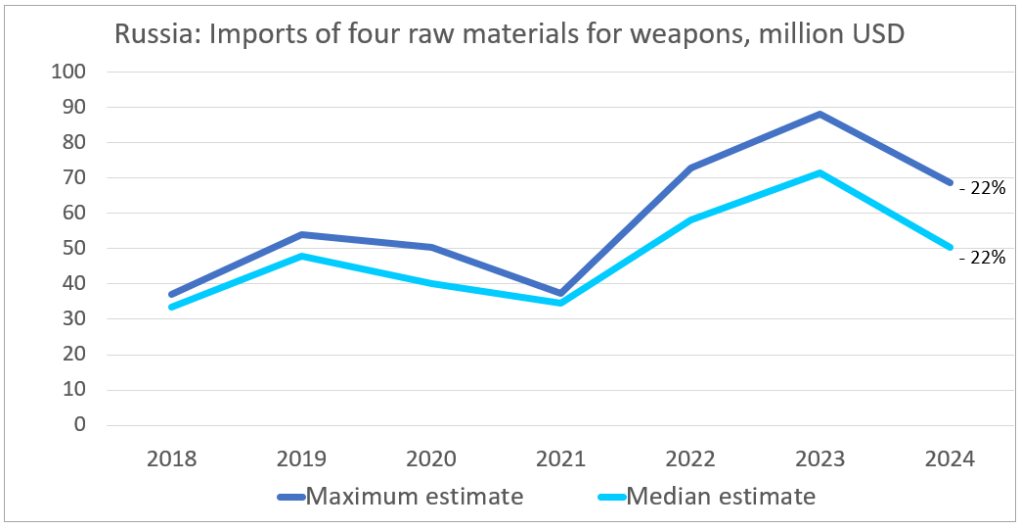


Figure 9: Russian imports of vital raw materials for arms production. There is a 22% nominal import decline in 2024, both under the higher estimate (dark blue) and the median (pale blue).

[83] Refined chromium (HS 81122x), cellulose derivatives including nitrocellulose (HS 3912), tantalum (HS 8103), sodium chlorate (HS 282911). Source: Russian customs data.

Our analysis of imports and conclusions of reduced capacity in Russia's production of key model armaments, concur with intelligence and analysis conducted by independent Ukrainian sources.[84] These sources find a recent reduction in the production of battle tanks, noticeably at the vital *UralVagonZavod* factory, due to a reduction in the imports of key technologies and raw materials.

Since the start of the full-scale war, the only new tanks Russia has produced are T-90M tanks, with an annual output in 2025 of ca. 280-300 tanks.[85] At the beginning, part of this production capacity was used to upgrade the T-90 to T-90M variants, both for improvement and for standardisation. Production capacity for T-90M increased from 2022 to 2025, but we now expect this to stagnate and then slowly decrease. All other battle tank deliveries are either overhauled tanks from long-term storage, or destroyed tanks that have been salvaged from the battlefield and sent to factories for reconstruction or heavy maintenance.

Of the approximately 7,350 battle tanks in Russian outdoor long-term storage facilities before the full-scale invasion in 2022, more than 4,800 had been sent for overhaul as of September 2025.[86] Apparently, this leaves 35% of the remaining vehicles from the original stock. However, it is estimated that by the end of 2025, almost all relevant modern battle tanks (T-72, T-80, and T-90 variants) will be completely gone.

Of the older variants that are still relevant as they are equipped with excavation and mine clearance equipment, it is estimated that about 800 of the T-62 model will exist by the end of 2025.[87] Of vehicles sent to factories for overhaul or repair, ever more of these will probably require more time-consuming and expensive efforts to reach operational status. We assume that this will also have an impact through 2025 and reduce production throughput by 2% per month. This means that there will be a significant queue of vehicles for overhaul some months into 2026, but these will take increasingly longer time to repair, and production per month will decline considerably. We assume that production of overhauled battle tanks from long-term storage will fall by 10% per month in 2026, until only repairable tanks from the battlefield |are left available for overhaul - alongside a few T-62s.

Figure 10 shows our projection of change in Russian stock of battle tanks in 2025 and 2026. Russia may lose around 200 tanks net by the end of 2025, and another 550 tanks by the end of 2026.[88]

It is unlikely that all the vehicles that were sent for overhaul have been made fully operational, we estimate that 5% have been beyond repair. This gives a production of 4,550 refurbished vehicles by the end of 2025. Production of new and upgraded T-90Ms from 2022 to the end of 2025 is estimated to be approximately 750 vehicles, i.e. a supply of ca. 5,300 refurbished and new tanks. The supply of new and refurbished vehicles probably peaked around winter 2024-2025, with production gradually declining through 2025. As mentioned above, we estimate 5,800 lost tanks to be beyond repair.

Thus, we assess that Russia had an available stock of 3,300 operational battle tanks in 2022, and will have 2,800 tanks by the end of 2025, i.e. a net reduction of approximately 500. We also estimate a net reduction of a further 550 tanks in 2026, given the war continues with the estimated loss rate. This will

[84] *EuroMaidan Press*, «Frontline Report: Tank production in crisis as Russia's war economy hits the wall», 18 November 2025.
[85] Conflict Intelligence Team, «How Many T-90M Tanks Does Russia Produce?», *Teletype*, 19 June, n.d., x
[86] Jompy [@Jonpy99], profile on X, *Twitter (X)*, https://x.com/jonpy99
[87] Jompy [@Jonpy99], profile on X, *Twitter (X)*, https://x.com/jonpy99
[88] These and subsequent figures have been rounded to the nearest 50 as these are estimates.

leave a residual stock of 2,250 tanks by the end of 2026 which represents a 32% net loss of the original stock of 3,300 operational tanks in 2022.

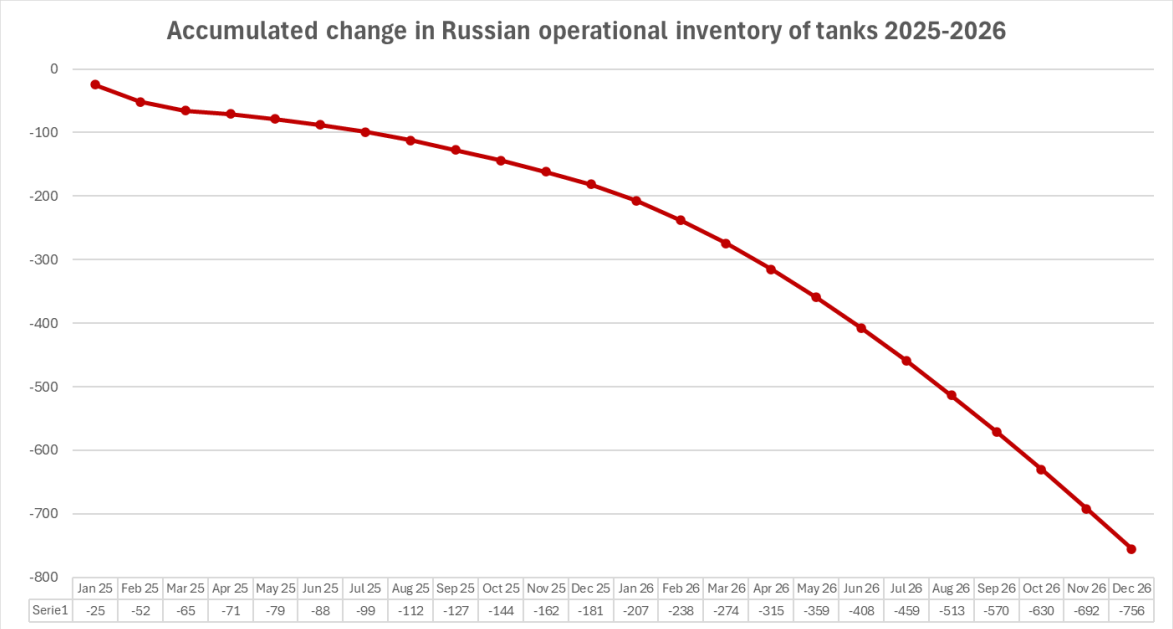


Figure 10: Estimated cumulative change in the number of Russian operationally available tanks.

Russian stockpile of operational tanks	
2022-02 Total operational at the start of the full-scale invasion	3.300
2025-12 Newly produced/upgraded T-90M	750
2025-12 Remanufactured variants of the T-55, T-62, T-72, T-80	4.550
2025-12 Estimated irreparable losses	5.800
2026-01 Estimated inventory at the beginning of 2026	2.800
2026-12 Estimated net reduction in 2026	550
2026-12 Estimated inventory at the end of 2026	2.250

There are further indicators that important Russian materiel stocks are getting depleted with critical effects. The composition of the Russian battle tank losses, i.e. the proportion of losses made up by different models and variants, indicates that the oldest models such as the T-54 / T-55 and T-62 make up a significant share of the total stock of tanks. The losses of these models have been 25-30% of total losses from July to September 2025. The ability to carry out offensive operations is therefore relatively reduced. Up until August 2025, the losses of Russian armoured fighting vehicles and personnel carriers (IFVs and APCs) have been twice as high as for battle tanks. This is normal, since in most armies they are far more numerous. However, this has been turned on its head as in August and September, Russia lost twice as many battle tanks as IFVs and APCs.[89] This is a strong indication that there may be a serious shortage in the supply of refurbished and new models of such vehicles. However, we cannot rule

[89] Richard Vereker [@verekerrichard1], «1) Russian tank loss update,» *Twitter (X),* September 26, 2025,

out that this is also partly due to Russia's priority to building up new divisions for a planned war with NATO. Unfortunately, the sum of indications also points in this direction.

We have not been able to establish an unambiguous view of Russian production capacity for artillery. We are therefore not able to give similar predictions for the availability of Russian tube artillery systems.

5.6 Requirements for the defence of Europe after a Russian (partial) victory

In the war in Ukraine, Russian forces are numerically superior by a factor of between 2:1 and 5:1, depending on frontline section. In the event of a Russian victory or a cease-fire, we estimate that Russia would still have to keep some forces in occupied territories but could release up to 500,000 soldiers for other tasks, including demobilisation. These soldiers would be battle-hardened, and consist of many convicted criminals and other groups with mixed prospects of integration into Russian society. Returning veterans frequently commit violent crimes in their local communities, and amid a weakened economy, the social and public resources to manage such violent returnees have become reduced.

Therefore, and parallel to any long-term strategic objective of re-establishing the power and geopolitical influence characterising the former Soviet Union, the Kremlin regime may need to retain a perception of enemies at its borders and a need for continued warfare. This may manifest itself in the event of popular democratic mobilisation in Belarus or Georgia, but primarily looking towards Poland, the Baltics, and Finland for perceived enemies and possible conflicts. The Baltic states are the most vulnerable in this context, as they have the weakest defences, the smallest territory and populations, therefore being easy to invade. Russian occupation would provide land connection for Kaliningrad and create better strategic depth and a security buffer zone for Russia. In addition, Estonia and Latvia have significant ethnic Russian minorities, about 25% as recently as 2020.[90] Below, we calculate the costs of deterring a Russian attack after a Russian (partial) victory in Ukraine under the realisation of Scenario 1.

Russia is unlikely to attack Europe unless the USA is engaged in war over Taiwan. If the United States is challenged militarily by China, it still has insufficient air defence, missile defence and strategic transport capacity to fight in two major theatres of war at the same time.[91] However, although the United States may have sufficient ground forces to support Europe, the lack of support systems in Europe will prevent deployment of larger US forces. Russia and China may have a converging interest in countering the US role as a leading global military power, and its geopolitical influence in both Asia and Europe.

It is therefore likely that major wars in Asia and Europe - between China and the US with allies, and between Russia and Europe - may happen at the same time. Europe must therefore be prepared to fight a war against Russia without much support from the United States. It is hardly realistic for the US to deploy large ground and air forces to Europe without the protection of reception facilities, logistics and air bases against attacks from long-range missiles and drones. If Russia attacks NATO in Europe, it will most likely also invade parts of the North Calotte - the arctic region of Norway, Sweden and Finland - to

[90] Sarah Coolican, *The Russian Diaspora in the Baltic States: The Trojan Horse That Never Was*. LSE IDEAS, December 2021.
[91] Sidharth Kaushal and Juliana Suess, *The Impact of a Taiwan Strait Crisis on European Defence*. (London: RUSI, 2024).

establish a buffer zone between NATO land forces and its strategically important installations on the Kola Peninsula. These facilities are bases for Russian strategic submarines with second-strike nuclear capability and must be protected to maintain nuclear deterrence. It is therefore very likely that Russia will seek to occupy Finnmark and Northern Finland in a war against NATO in Europe.

In the Baltic States, standing armies consist of around 10,000 soldiers, and up to 25,000 reserves.[92] In addition, there are 7,500 standing European forces, so that the defence of the Baltic States at best consists of three real manoeuvre brigades. A German armoured brigade with 4,800 soldiers will be operational by 2027.[93] These, however, lack the support of required artillery- and missile brigades. If we assume that NATO has time to mobilise reserves in the area, there will thus be an available European defence force with approximately 47,500 personnel. The force will have the advantage of holding the defensive position in a flat, mixed terrain with forests, marshes and open land (multiplier 1.2). They will probably have prepared defensive positions (multiplier 1.5) [94] and although not being tested in combat, we estimate that NATO forces will have a qualitative advantage of 1:1.2, where 100 NATO soldiers are equivalent to the combat value of 120 Russian personnel. Since Russian forces have recent combat experience from Ukraine, which NATO forces do not, it is unlikely that the qualitative difference is any higher. With all these advantages, the NATO force will be able to stop a Russian force of 100,000 soldiers.

If the Russian force has 120,000 personnel or more, it will likely be able to advance through NATO defences. (If it turns out that the qualitative advantage of the NATO force is as high as 1.5, Russia will most likely be able to break through with a force of 150,000 soldiers). We assume that both sides have balanced forces for combined arms operations, including adaptation of drones to a larger extent than we may see today in NATO forces. If Russia can achieve a tactical surprise, it will mean that the combat power of its forces can be assessed as 1.3 to 5 times greater - depending on the degree of surprise - than what they would otherwise achieve purely numerically.

A similar calculation for NATO's land forces on the North Calotte, indicates that against 20,000 NATO soldiers, Russia would likely achieve a breakthrough with 50,000 army personnel. Here we also assume that neither side achieves air superiority quickly. Without reserve personnel and equipment, NATO's ground forces will lose so much combat power within 5-10 days that they will no longer be able to provide relevant resistance, if the Russian force is able to replenish its units or deploy a second echelon of ground units. Locally, the ability to break through will depend on the accumulation of forces along different axes, etc. This shows how important it is to strengthen the defences in Finland and Norway, significantly faster and in larger volumes beyond current plans. In the event of a ceasefire in Ukraine in 2026 or 2027, Russia will be able to challenge NATO in 2028 or 2029 and planned rearmament after this time will become irrelevant to the first and decisive phase of a possible war. It may also be possible that China cuts off access to critical minerals and components, thereby weakening or halting Western armament production. Supply chain bottlenecks could have the same consequences as during the pandemic in 2020, which brought knock-on effects on technology production until at least two years after restrictions were eased.

[92] IISS, *The Military Balance 2025*. (London: Routledge for the International Institute for Strategic Studies, 2025).
[93] Deborah Cole, «German troops start first permanent foreign deployment since World War II» *The Guardian,* May 22, 2025,
[94] Dupuy, 1979: *Numbers Predictions & War.* pp. 228-230.

It is possible that Russia may start such a war two years after a ceasefire in Ukraine.[95] Russia is expected to reorganise and build up three main capabilities: ability to conduct offensive operations in positional warfare as seen in Ukraine today, ability for manoeuvre warfare as in 2022, and capabilities for long-range precision fire.[96] These capabilities should be expected to be integrated, and may be used in parallel in combat, adapted to the adversary's level of preparedness, and whether or not NATO forces are fully operational. With only 100-200 km from the Russian and Belarusian borders to the Baltic Sea, it is extremely important to establish prepared defensive positions with minefields, anti-tank ditches, etc., to be able to stop a Russian offensive. If this is not prepared in advance, or the available defence forces are not significantly increased, one can expect a Russian breakthrough of positions and advance to the Baltic Sea within 4-5 days. The speed of a Russian offensive depends on the degree of preparation and available defence forces, a challenge that underpins NATO's new *Eastern Flank Deterrence Line*.

For Europe, access to reserve personnel and materiel is crucial for how long brigades may fight. Already after 4-5 days, each brigade must be supplied with replacement personnels of 500 personnel to be able to continue combat with approximately the same combat power. The heaviest losses occur in the infantry companies, with up to 20% per day.[97] In the same way, it is essential to replace lost material. If Russia manages to cut the lines of communication into the Baltics, and thus curb supplies of personnel and materiel, it will seal the fate of the NATO forces there. A rapid action to reduce the ability of Russian forces in Kaliningrad and St. Petersburg to isolate the Baltics, is therefore essential. Prepared storage of NATO materiel in the Baltic States is therefore also very important. NATO must be prepared for Russian use of civilian vessels to mine Baltic ports, and drones to block airports.

We believe Russia will be superior in drone warfare, also denying NATO air superiority by use of air defence in Russia, Kaliningrad, and Belarus. The effectiveness of air forces and the ability to protect air bases will determine whether, and how quickly, NATO may establish air superiority. However, it is unrealistic to assume that this can happen until several weeks into a war. Russia will likely seek to knock out as many NATO air bases as possible in the first phase of a war. NATO countries will be able to partly operate in the air, and have superior technology for the land war, with the exception of drones. Russia will have large quantities of long-range missiles, and Europe must build significant missile defences.[98]

To be able to stop a Russian attack, we see a need for about half the number of land forces that Russia can deploy relatively quickly. If Russia implements current plans and builds up standing army forces beyond their level in 2022, providing for 250,000 standing land forces by 2028, they may deploy 50,000 soldiers against the Arctic and 200,000 against the Baltics in the first phase, and succeed with a rapid campaign like the one they attempted in 2022. To respond to this threat and establish a credible deterrent force, NATO must have at least 95,000 land forces in the Baltics, and 25,000 on the North Calotte. Therefore, 5,000 new ground forces must be quickly established for operations in the Arctic by the deployment of the equivalent combat power of an extra mechanised and reinforced brigade, recruited from Norway and Sweden. If we expect Russia to be able to concentrate 200,000 troops with high readiness within tactical striking distance of the Baltics, 50,000 new earmarked NATO land forces is

[95] The Danish Defence Intelligence Service, *Updated assessment of the threat from Russia against the Danish Realm*, 9 Feb 2025.
[96] Mason Clark, *The Russian Military: Forecasting the Threat*, Institute for the Study of War (ISW), October 2025.
[97] Dupuy, *Attrition: Forecasting Battle Casualties and Equipment Losses in Modern War.*
[98] Mykola Bielieskov, "Putin's escalating air offensive is overwhelming Ukraine's defenses", *Atlantic Council,* July 1, 2025.

required for their defence. These new forces must have the readiness level and logistical capability to endure a long deployment allowing them to balance a possible Russian concentration of 200,000 ground troops as we saw against Ukraine in 2021–2022. European NATO forces must be balanced, possibly prioritising division and corps-level support units before new manoeuvre brigades.

Personnel and equipment reserves must also be established to enable replenishment of units after losses. The war in Ukraine has so far required personnel replacements of 2.5-4 times the original strength among frontline units. For equipment, depletion is 2-3 times the original operational inventory. For the Baltics, personnel must be trained and equipment procured for a minimum of 2 times the initial force, in order to establish realistic deterrence against a protracted war. Russia has depleted most of its strategic stockpiles of army equipment, which means that Europe may first establish a first line of defence with 50,000 plus 5,000 new forces. Behind the existing and new forces of 95,000 and 25,000 earmarked for the Baltics and the North Calotte respectively, there should be twice as many replacement personnel and material sets. It is therefore a need for long-term planning and investment in the defence industry in Europe, to enable a reversal of exports, deliver equipment for 55,000 new troops, and produce reserve materiel for 240,000 troops available in storage. The same number of reservists must be trained. Existing troops must also receive new weapons systems in accordance with normal renewal of capabilities, which again requires added production capacity. It implicitly follows that there is a need to ensure access to strategic raw materials and components for efficient supply chains.

The troops mentioned above comes in addition to forces operating from Poland to keep open the Suwalki Gap between Kaliningrad and Belarus, and to secure the land connection with the Baltic States in the event of involvement of Belarusian forces. This presupposes the military neutralisation of Kaliningrad, and the development of better infrastructure for transport and deployment of forces.

We consider that the defence of the Baltics must include at least five complete, standing manoeuvre brigades, one standing artillery brigade, and one standing missile brigade, intelligence and reconnaissance battalions, engineering units, logistics, etc., with a total of at least 50,000 standing personnel and stored ammunition. Solid drone defences are needed, Lithuania alone may need 3 million drones to counter Russian capabilities.[99] For Europe, drones may have an effect that Ukraine does not exploit, in that they may knock out Russian air defences and thus increase the usefulness of Europe's plentiful fighter force. Anti-drone capabilities are another crucial element.[100] Timing is extremely critical, as Russia could be ready for a new war as early as 2028, in the event of a ceasefire in Ukraine in 2026.

Sufficient arms and ammunition must be stored in advance in the region, but storage facilities must also be built in Poland or Germany for further reinforcement in the event of protracted hostilities. This will require major investments in warehouses, ports, roads and railways, to receive allied reinforcements in the Baltics. Furthermore, capacity development at Baltic hospitals and shelters must be accelerated, and there will be a need to construct significant port facilities and permanent fortifications, with their associated roads and facilities for the accommodation of standing forces.

[99] Siobhan Robbins, «EU warns Europe must start building millions of drones to defend itself against possible Russian attacks,» *Sky News,* June 26, 2025. LRT, «Lithuania needs 3 million drones to defend against Russia, says EU commissioner,» July 24, 2025.
[100] Bronk, *NATO should not replace traditional firepower with drones*.

Compensation of private land will be required in the event of expropriation along the coast and large parts of the border with Russia, Belarus and Kaliningrad. Empirical compensations for agricultural land were 2,400 euros per hectare in Poland in 2005, and 10,000 - 25,000 euros per hectare in Germany before 2012, against 66,700 euros for beach areas in Riga in 2014.[101] With an estimated compensation of 25,000 euros per hectare and the development of fortifications etc. over 500 square kilometres (500,000 hectares), this gives a reasonable expropriation cost of 12.5 billion euros. Lost agricultural production will amount to approximately 1,020 euros per hectare in Lithuania, and probably somewhat higher values in Poland and Estonia, corresponding to a total of about 600 million euros in lost, annual production.[102]

For the Baltics, with up to 1,000 km front line, threat from 200,000 Russian soldiers (first wave) and rapid build-up of a defence line, the following provides an estimation of the increased costs of deterrence:

Million euros, constant prices	2026	2027	2028	2029
5 manoeuvre brigades	6.500	6.550	4.600	3.650
Ammunition 3 months	2.000	1.000	400	400
5 double brigade reserves	2.000	2.200	2.400	2.600
1 Artillery Brigade, expenses	2.500	1.220	980	990
Ammunition 3 months	4.000	4.000	3.000	2.000
1 Missile Brigade, expenses	1.750	1.760	1.520	1.530
Ammunition 3 months	1.500	1.200	100	100
2 E-/Reconnaissance battalions	500	500	700	700
1 Logistics brigade, operations	500	510	520	530
3000 trucks, 1000 cars	900	700	200	100
1 Air Defence brigade, ammunition	1.200	1.200	710	710
1 MP battalion, w/vehicles	100	100	70	80
Corps staff, deployment, workshops	1.000	1.000	900	800
Ammunition etc., exercises	1.000	1.000	1.100	1.200
Various pre-storages, 3 months	3.000	3.000	2.000	1.000
Connection, satellite, 10,000 cars	1.000	800	800	800
Anti-drone capabilities	1.000	1.000	1.000	1.000
Ops, attack, & intercept drones	2.800	2.130	1.680	1.690
Drone centres, land & sea drones	350	120	120	120
Air defence, Northern Europe	7.000	5.000	2.500	2.250
Ammunition, fighter aircraft	2.000	2.000	1.100	1.100
Warranties, contract buyouts, etc.	5.000	4.000	4.000	4.000
Fortifications and border facilities	5.000	3.000	2.000	500
Compensations for expropriation	5.000	5.000	2.000	500
Roads, ports, railways, etc.	7.000	5.000	4.500	4.500
Local hospitals, shelters, etc.	2.000	2.000	1.500	1.500
Loss, closed airspace, agriculture, etc.	1.000	1.000	1.000	1.000
Production loss, 90,000 soldiers	3.500	3.500	3.500	3.500
SUM, rounded	71.000	60.500	45.500	33.000

[101] Polish Real Estate Scientific Society, *Some Aspects of Compulsory Purchase of Land for Public Purposes* (Olsztyn: Polish Real Estate Scientific Society, 2010). LexTechSuite, *In the Case of Visiting and Perepjolkins vs Latvia*, 2014.
[102] ZUR, «20 years of the CAP: Agricultural progress is significant, but it is necessary to strengthen the sector's resilience», Jan 2025,

Total additional costs of operations, investments and losses for the Baltics thus amount to about 210 billion euros over four years, with 71 billion euros in 2026, gradually declining to about 33 billion euros in the fourth year. In the first year, this amounts to 0.3% of Europe's GDP, gradually falling to 0.15% of GDP. A reasonable Norwegian contribution, based on realistic burden-sharing and benefits, could be 17 billion euros (NOK 200 billion) over four years, with 5 billion euros (NOK 60 billion) in 2026, in addition to the costs of the current Long-term Defence Plan, support and reconstruction of the remaining Ukraine.

An increase in land forces on a smaller scale is also necessary on the North Calotte, where Sweden and Norway will have to provide their forces. Preparations will also have to be made with new fortifications in Finland. Here, the areas are larger, but strategic depth is more favourable with better opportunities for long-term defence, air power, and allied reinforcements. A total cost increase in Finland and the Nordic Arctic involves significant development of infrastructure, fortifications and pre-storage over greater distances, and with a higher cost level, but with need of only one new brigade beyond current plans.

We estimate that ammunition for a Norwegian brigade with mechanised infantry and an artillery battalion, costs an estimated NOK 25 billion per month of combat. If scaled up to a separate artillery brigade, the cost of ammunition for that unit will probably exceed NOK 10 billion per month. The setup and timing of a separate missile brigade with (mobile) air defence will have an investment framework of approximately NOK 50 billion, with additional ongoing ammunition needs in the event of sustained combat.

Although we assess the requirement and build-up of stored supplies, the Nordic countries are dependent on sea-borne supplies. This entails a considerable need to strengthen Norwegian and Nordic air and naval defences in order to protect the flow of supplies and reinforcements. In the Nordic region, Norway is alone in the defence of our coastal and marine areas, and the adopted force plan for the Norwegian Navy entails technical renewal without significantly expanded capacity. Here, too, the defence capability depends beyond the first few weeks on Allied reinforcements. More worryingly, the long-term plan involves phasing in long-range drones and air defence only from 2029, and no phasing in of maritime drones. A requirement for sea drones and integrated air forces with significant use of drones will most likely result in increased costs beyond the framework of the long-term plan.

For Finland and the High North, we estimate the following operational, material and development needs:

Million euros, constant prices	2026	2027	2028	2029
1 Reinforced Brigade, ammo 3 months	2.700	2.500	1.150	1.150
Artillery ammunition 3 months	2.000	2.000	1.000	1.000
Barracks, 500 trucks, 1000 cars	300	200	0	0
(Sea) drones, counter-measures	2.100	2.100	1.010	1.010
Support troops, including materiel	200	200	100	100
Air defence, Northern Norway	800	800	100	100
Ammunition, exercises, storage	900	900	310	310
Infrastructure, roads, etc.	2.000	3.000	2.000	2.000
Fortifications and border facilities	4.000	3.500	1.500	500
Compensations for expropriation	2.000	500	100	0
SUM, rounded	17.000	16.000	7.000	6.000

Thus, defence expansions in the High North have a cost of about 46 billion euros over four years, with 17 billion euros in 2026 followed by decreasing amounts. Much infrastructure may be developed within the 5% NATO target, but this is still public expenditure, beyond existing plans and support to Ukraine. Based on Norway's location and benefit of a Swedish-Norwegian deployment in the High North, we calculate a reasonable Norwegian contribution of up to NOK 100 billion in total, with NOK 30 billion in the first year.

Total European costs for military preparation in the Baltics and the Nordic Arctic are thus estimated at 256 billion euros over four years. For Norway, based on reasonable burden-sharing, we assume an increased cost of 26 billion euros (NOK 300 billion) over four years, with up to 8 billion euros (NOK 90 billion) in 2026, corresponding to 90% of annual Norwegian defence spending, in addition to the already approved expansion of Norway's armed forces. After the first year, Norway will be faced with gradually decreasing funding needs in line with the overall progress, as according to the two tables above.

5.7 Requirements for (partial) Ukrainian victory

The Russian stockpile of heavy equipment is expected to be significantly reduced by the end of 2026, and this provides opportunities for Ukraine if they are supplied with enough balanced equipment for their brigades, allowing them to not only match, but establish a superior combat power over the Russians. With the complex combat environment and continuous innovation of arms systems, Ukraine needs a balanced and wide range of armament systems that pose great challenges to European and Ukrainian industry. Based on our analyses, we will estimate Ukrainian equipment requirements that, in our understanding, will provide a certain superior Ukrainian combat power, and enable the stabilisation of the frontline with capabilities for Ukrainian counteroffensives under Scenario 2.

We do this in two ways for the core material in the model – battle tanks. First, we apply data for Russian losses and inventories from the studies above, to calculate the Ukrainian equipment needs to achieve superior combat power, and estimate the cost of this equipment based on prices in recent European procurement contracts (Method A). To this, we add the costs of other equipment typically employed by army brigades. We then apply an alternative method where we calculate the need for Ukrainian manoeuvre and artillery brigades, and estimate these units' equipment needs and costs based on empirical figures for complete materiel kits without spare parts in Norwegian brigades, adjusted for cost level and local procurement (Method B). These methods should ideally give comparable results.

Under Method A, we found in Chapter 5.5 that Ukraine needs a core of c. 2,300 battle tanks or more, and artillery and other arms systems. In this range, the need for equipment will vary between a minimum level and a maximum level, for short-term delivery. We consider that the range to achieve parity with Russia includes 1,500-2,500 battle tanks and 10,000-20,000 IFVs/APCs. Again, we remind that there is a need for balanced equipment, so that a complete tactical, integrated system is established with all the necessary capabilities, including artillery, trucks, drones, etc. Operating costs and salaries to personnel are assessed as being covered within the existing Ukrainian budget.

If Ukraine can develop a balanced army force during 2026, with up to 2,300 or more battle tanks at its core, and additional support to train army units to achieve a significantly higher skills level than Russia, they have a real chance of being able to force Russian forces backwards and out of Ukraine. With this core, and balanced volumes of all types of materiel, the army of Ukraine can deploy integrated, tactical systems. Ukraine must match the Russian force strength and have at least a 10% quantity margin, which in combination with higher-quality and better trained personnel will assure military success.

Under Method B, and given that we do not know Ukrainian equipment stocks, we alternatively estimate equipment losses, based on Ukrainian personnel losses. As of mid-April 2024, we estimate that Ukraine had lost about 140 percent of the initial heavy land equipment it possessed in 2022.[103] Normally, some 40 percent of a defender's material losses can be repaired (based on 10 artillery brigades and 45 manoeuvre brigades, respectively). This means that Ukraine lost irreparable equipment in two years, equivalent to the materiel of 46 brigades. Western equipment donations were crucial to maintain a degree of operability within Ukrainian brigades, in addition to Ukraine increasingly exchanging some traditional firepower with drones. Drones are an addition to traditional armament systems, and complement these, assuming that the opportunity costs and benefits against other systems balance.

If we project the similar periodic losses up to the end of 2025, but subtract 40% of these losses of heavy materiel on the basis that the Ukrainian units had substantially less materiel, we arrive at a loss of another 22 brigade sets, with a total loss of material equivalent to 68 brigades. In addition to these losses, Ukraine has established 51 new manoeuvre brigades and 6 new artillery brigades since February 2022, which also need equipment in excess of those lost. It is a big challenge to Ukraine that they lack materiel to equip these units sufficiently, they will need European support to achieve this.[104] The above-mentioned materiel requirements will only equip the manoeuvre and artillery brigades, and do not include materiel for other forces, or ammunition. Losses in 2026 and beyond will also add to the total needs.

Based on empirical data, the investment needs of a Norwegian manoeuvre brigade, excluding air defence, is approximately NOK 100.5 billion measured in constant 2025 values. This should normally include spare parts for peace operations over a certain period, but as we analyse war-time needs this will only sustain a few weeks of operations, and may be disregarded. Since Ukraine can source some equipment from its own industry, with significantly lower labour costs than Western Europe, we assume that it may procure an equipment kit for 80% of the cost of a Norwegian kit. However, Ukrainian brigades have 40 percent less personnel and materiel than a Norwegian brigade, so we estimate a cost of NOK 46.2 billion (4 billion euros) for a Ukrainian manoeuvre brigade equipment set. Since an artillery brigade often has about 40 percent of the personnel and equipment of a manoeuvre brigade, we set this investment cost at 1.6 billion euros. A weighted average for 45 manoeuvre brigades and 10 artillery brigades, is 3.5 billion euros.

In order to calculate equipment needs, we must assess replacement materiel accounting for casualties, add equipment for new brigades, and deduct already delivered equipment and military support. Total committed military support to Ukraine is 153 billion euros,[105] of which we estimate 128 billion euros to cover army equipment, excluding aircraft, helicopters, air defence, and navy equipment. Of total

[103] Unpublished analysis presented at NUPI in April 2024.
[104] Thibault Spirlet, "Ukraine Army Forming New Brigades but Can't Supply All of Them," *Business Insider,* July 4, 2024,
[105] Kiel Institute, "Ukraine Support Tracker," accessed October 2025.

commitments, we estimate 85 percent to be delivered by the end of December 2025 (75 percent had been delivered as of August), at which time Ukraine will have received approximately 109 billion euros in military equipment support (we lack data to separate the costs of support for training).

Estimated needs for army equipment		No. of brigade equipment kits	Billion euros
Loss February 2022 - December 2025	+	68	242
Donations until August 2025	-	31	109
New manoeuvre brigades after 2022	+	51	202
New artillery brigades after 2022	+	6	24
Total material requirements and costs	=	**95**	**359**

The above table shows our estimates of Ukraine's needs for army materiel to replace what has been lost over four years, and to fully equip all 96 manoeuvre brigades and 17 artillery brigades. We assume that the 30 territorial brigades do not have the same needs. The total cost of replacing all equipment losses examined over four years, is estimated at **359 billion euros**. Other requirements, such as air defence, ammunition, air forces, etc., are additional. All above-mentioned quantities and total amounts cannot be realistically acquired in 2026. However, they illustrate the needs and urgencies in placing orders among Europe's military producers and drastically increase capacity. As of 2026, we estimate that in order to maintain status quo, Ukraine will need to replace 17 brigade kits each year, a quarter of the 2022-2025 losses – worth 60 billion euros, which is roughly equivalent to the country's annual defence budget.

At first glance, it may look overwhelming that Ukraine needs new equipment for large parts of its army. But Ukraine's stocks of some equipment categories are very low, and materiel supplies are urgent. It must be emphasised that the above losses also include the whole of 2025. Ukraine's personnel losses have been about 2.5 times higher than the number on the frontline today. The war is terrible and requires a high number of human victims.

The calculations arriving at the loss of 95 heavy-equipment brigade kits represent the entire loss over four years, not annually. The materiel need is difficult to allocate temporally, but the entire replacement need is neither necessary nor possible to satisfy in 2026. Therefore, we consider below the needs under Scenario 2 as a spectrum, from military ability to stabilise the front and pose a certain offensive threat ("Min"), to achieving superior combat power that allows for greater reconquests of territory ("Max").

Below, we estimate Ukraine's equipment needs in 2026 within such a spectrum. We study recent defence contracts in Europe, from *Defence24* and national budgets. We calculate the costs of procuring the materiel estimated from Russian inventories in Chapter 5.5 (Method A) and validate the result against a calculation of materiel costs at brigade kit level (Method B). Further, we include all other kinds of arms and components that are naturally needed to organise 95 brigades – such as artillery, ammunition, air defence, long-range missiles, and a number of other components.

Under **Method A** we estimate that the costs of matching Russian combat power as derived from Chapter 5.5, are covered within a spectrum of possible deliveries, with either a minimum volume delivered in 2026 and more in 2027, or a maximum delivery of all the necessary equipment within 2026. Under **Method B**,

we estimate the materiel kits to be delivered to at least half of the 95 brigades in 2026, or a maximum delivery to all brigades. Within such a spectrum, we assess that Ukraine will need the following equipment in 2026 in order to establish superior combat power under Scenario 2:

Euros, constant prices	Needed quantities	Min 2026	Max 2026
Method A: Materials based on recent contracts		171 billion	309 billion
Battle tanks[106]	1 500-2 500	45 billion	75 billion
Armoured infantry (IFVs, APCs)	10 000-20 000	95 billion	190 billion
Field vehicles, partly civilian models	20 000-30 000	2 billion	3 billion
Communication, number of sets	100 000	1 billion	1 billion
Artillery, tube, gross number of sets	2 000 - 3 000	20 billion	30 billion
Grenades, artillery		8 billion	10 billion
Method B: Materiel for 95 brigades over 1-2 years		180 billion	359 billion
All other equipment requirements		29 billion	32 billion
Field hospitals, evacuation, etc.	20	2 billion	2 billion
Artillery units, missile 300 km, sets	200	1 billion	1 billion
Air defence, batteries incl missiles	50 – 100	5 billion	8 billion
Mobile command, radar, jamming, etc		5.5 billion	5.5 billion
Drones, FPVs, etc.	8 million	5 billion	5 billion
Drones, attacks	10 000	0.5 billion	0.5 billion
Sky Shield for Ukraine, extended		10 billion	10 billion
TOTAL material requirements, average of Methods A-B		205 billion	366 billion
+ Today's allied support for Ukraine		85 billion	85 billion
= Total allied military support (average of A-B)		290 billion	451 billion
- Financing from the IMF, the World Bank, Canada, Japan, etc		- 12 billion	- 12 billion
= SUM European military and direct support		278 billion	439 billion

We see for Method B that when we apply empirically based costs for Norwegian brigades and adjust for Ukrainian cost levels and brigade characteristics, the estimate is very similar to the one arriving from Method A, where we start with the needs to exceed Russian equipment holdings and estimate the costs for the individual weapon systems based on recent European defence procurement contracts.

By applying an average of the results of the two methods, we estimate that Ukraine will need military equipment and operations, etc., in order to develop superior combat power and realise Scenario 2, equivalent to 290 – 451 billion euro, while multilateral institutions, Canada, Japan, etc., are assumed to

[106] We calculate an increasing unit cost per tank, because procurement beyond today's realistic levels will require buy-outs of contracts, long-term guarantee purchases to increase production capacity, etc.

uphold annual funding of at least 12 billion euros. This gives a European cost for total military assistance estimated at **278 - 439 billion euros** in the first year of realisation of Scenario 2, depending on the pace of arms deliveries, and whether one seeks stabilisation of the frontline with some offensive capacity ("Min") or a clearly superior combat force with the ability to re-conquer occupied territories ("Max").

However, since the equipment under the scenario will yield Ukrainian superiority with scope for offensives and pressure for a peace deal, the total new equipment of 366 billion euros ("Max") will be regarded as a one-time cost that will not be repeated beyond the first 1-2 years needed to deliver the military materiel. The remainder, i.e. compensation of losses and material for later years, will then be covered within the current annual level of support at 85 billion euros. As we shall see in Chapter 7, the scenario's counter-offensives and /or acceptable peace agreement, will result in European savings from the repatriation of refugees of 20 billion euros already in the first year.

5.8 European arms production

Europe as a whole is among the world's largest arms manufacturers and exporters, only US arms exports surpass those of Europe. Europe already has a production of weapons that can meet its needs in the defensive fight against Russian aggression. The challenge is that most of the arms exports go to countries outside NATO and Europe, instead of meeting the needs of Europe and Ukraine. France alone has larger arms exports than both China and Russia, directing as much as 63% of its exports to Asia and the Middle East. Below we reproduce how much each country exports to Ukraine, and how much is exported to countries outside Europe and NATO, in the years 2020-2024:

2020-2024	% of global exp	% to Ukraine	% to selected no-NATO countries			
United States	**43.0**	**9.3**	Saudi	12	Qatar	< 8
10 countries in Europe	**30,8**	**< 10**				
France	9,6	< 5	India	28	Qatar	9.7
Germany	5,6	19	Egypt	19	Israel	11
Italy	4,8	< 5	Qatar	28	Egypt	18
United Kingdom	3,6	10	Qatar	28		
Spain	3,0	< 5	Saudi	24		
Netherlands	1,2	< 10	Pakistan	20	Mexico	12
Poland	1,0	96				
Sweden	0,9	< 15	Brazil	22	Pakistan	18
Norway	0,8	21				
Czech Republic	0,3	78	Vietnam	9	Indonesia	6

Source: Stockholm International Peace Research Institute (SIPRI), 2025.

The total world military expenditure was around 2.200 billion euros in 2023. Europe produced defence products worth about 160 billion euros in 2023, of which 57 billion euros were exported.[107] The total global trade in weapons was around 120 billion euros in 2021, approximately 130 billion in 2022, and 100-130 billion in 2024, depending on source.[108] While Poland, Czechia and Norway export practically only to NATO countries and Ukraine, that share is low in France, Germany and Italy. In 2020-2024, Italy sent 71% of its exports to the Middle East, against almost no exports to Ukraine. Germany and France directed 37% and 28% of their arms exports to the Middle East, respectively, more than twice as much as to Ukraine.[109] Substantial exports to the Middle East or Pakistan were also performed by Spain, the Netherlands, and Sweden. NATO members whose main export destination was Ukraine over the whole period 2020-2024, were Germany (19%), Poland (96%), Canada (30%), and Czechia (78%) - while Norway directed 21% of exports towards Ukraine, almost at par with sales to the US market.

This implies that annual exports of military arms and weapons to the Middle East, constitute approximately 4.3 billion euros from Italy, 3.4 billion from France, 2.6 billion from Germany, and 1.5 billion from the United Kingdom. Altogether this sums up to 12 billion euros exported every year to the Middle East from these four NATO members, more than their exports and transfers to Ukraine.[110] In addition, the United States directed annual exports worth c. 21 billion euros (39% of totals) towards the Middle East, first of all to Saudi Arabia. Some of these exports include aircraft and naval vessels, but industry capacity is flexible and many manufacturers may alter productions over a certain time.

While Europe lacks weapons, European countries have large exports to three dictatorships in the Middle East – Saudi Arabia, Qatar, and the United Arab Emirates. Many of the largest producers are state-owned, while others are private and must be compensated for redirecting their exports towards Europe. During the Cold War, such shifts were provided by the Cocom rules (licensing) and NATO's weapons programmes, and the same types of instruments must be used to ensure necessary European supplies during a transition period.

Large parts of exports may probably only be redirected towards Europe by financial incentives in the form of guarantee purchases and compensations or buy-outs from concluded contracts. For several years, inflation has been stronger in the armament market than in other markets, and comparisons of arms production with other regions must take into account differences in wage levels and other local costs.[111] European rearmament in competition with an arms race in the Middle East may take on further inflationary effects, but this will happen independently of the support for Ukraine because European countries are themselves facing very large investments, which will only increase further if support for Ukraine is reduced with the effect that Russian advances increase the general threat levels. There is high capacity in the European defence industry that can contribute to achieve scenario 2. However, it requires political will to override commercial interests, force manufacturers to push customers down the priority list and postpone deliveries until after deliveries to Ukraine. It has a certain cost but is entirely possible.

[107] European Union, EU Council, *EU defence in numbers*, n.d.
[108] SIPRI, *SIPRI Yearbook 2024*, Stockholm, 2024, pp 8 and 11.
[109] Matthew George, et al., *Trends in International Arms Transfers, 2024*. (Stockholm: SIPRI, 2025).
[110] Mathew George et al, «Trends in International Arms Transfers, 2024», *SIPRI*, Stockholm, March 2025.
[111] Peter Robertson, "Real Military Spending 2024 – Military PPP," *Military PPP,* May 12, 2025,

5.9 Ukrainian military production

Ukraine's defence industry inherited a number of Soviet production sites, including *Antonov* (aircraft) and *Motor Sich* (helicopter engines), and is dominated by state-owned *Ukroboronprom*. Most big companies are state-owned, but an undergrowth of private manufacturers and developers is rapidly emerging, especially in drones, drone defence, and electronic warfare. Private manufacturers are reported to provide higher volumes of armament than state-owned ones, but at roughly equal monetary values.[112]

Former US commander in Europe, Ben Hodges, believes that Ukraine in particular needs longe-range missiles, not least in order to target Russia's important oil industry, and sufficient funding to expand the domestic arms industry.[113] Ukrainian companies produce several anti-tank and anti-ship missiles of shorter ranges, with more than 800 companies participating in missile programs.[114] Motor Sich together with Luch Design Bureau ant others, produce the *Neptune* land-to-sea missile and the 1,000 km range *Long Neptune*, Fire Point produces several per day of the 3,000 km range *Flamingo* missile, Pivdenne produces the 500 km *Hrim (Sapsan)* ballistic missile, while Pars produces the 140 km range *Trembita* cruise missile. Domestically produced *Lyutyi*, *Ruta*, *Peklo*, *Bars*, and *Palianytsia* long-range attack drones are used to strike Russia, while thousands of companies produce or modify smaller observation and field drones outside of traditional procurement.[115] On license, Ukraine produces German *Fuchs* personnel carriers and *Lynx* assault vehicles, and repairs these as well as battle tanks in Ukraine.[116] In the autumn of 2025, production of *Panther* tanks is also planned, in collaboration with Rheinmetall, while Nammo and Kongsberg are planning local production of ammunition for artillery and air defence, respectively.

The military production cluster develops rapidly. As in most countries, Ukraine's traditional military procurement agencies are slow-working and require time to perform procurements under strict regulations, but have the budgets to source armaments at scale and standardisation. The government of Denmark has pioneered schemes to order arms on behalf of Ukraine from producers pre-qualified by the Ukrainian government, while most lighter weapon systems and drones are normally developed, manufactured, tested, modified, and distributed outside of the traditional military procurement system, often directly by independent brigades such as Azov, Svoboda, or DaVinci Wolves. State-linked aggregator *Brave1* contributes to innovation and scale, while volunteer organisations like *Come Back Alive* and *Dignitas* help fund and adapt drones and other light equipment to the needs of local brigades.

Key tenets of the military-industrial cluster of Ukraine are decentralised innovation, production and procurement, the delegated authority of military units, the existence of semi-independent brigades, the

[112] UATV, «About 60% of weapons, military equipment in Ukraine produced by private sector», 7 May 2025..
[113] General Ben Hodges, «Lecture – Russia's War Against Ukraine: How Does it End?», *Maastricth University*, October 2025.
[114] Dimitro Schwartz, Ukraine has produced the first 100 of its own missiles, *Deutsche Welle*, 10 November 2024.
[115] Tom Balmforth, Long-range weapons Ukraine has developed since Russia's 2022 invasion, *Reuters*, 17 November 2025. In 2025, fewer than 50 UAV producers signed contracts with the Defence Procurement Agency, while a much higher number of companies actually developed and produced such drones outside of this supply channel.
[116] Elisabeth Gosselin-Malo, «Rheinmetall opens repair facility for combat vehicles in Ukraine,» *Defense News,* 11 June 2024, https://www.defensenews.com/global/europe/2024/06/11/rheinmetall-opens-repair-facility-for-combat-vehicles-in-ukraine/ Orysia Hrudka, «Rheinmetall to commence armored vehicle production in Ukraine in 2024», *Euromaidan Press,* 2 December 2023. Dylan Malyasov, «Rheinmetall begins Lynx fighting vehicle production in Ukraine,» *Defence-Blog,* October 26, 2024,

independent procurement mandates of the National Guard and army brigades, and the vital role played by volunteer organisations and civilian developers.[117] Market-like distribution mechanisms are being pioneered, partly based on supply-by-success-rate, while the challenge of standardisation is being partly overcome by sharing software, APIs, specifications and reference models. The highly distributed ecosystem contributes to more innovation and adaptation to local needs, and may have positive effects on curbing corruption in that kickbacks or bribes are less relevant to small-scale supply processes.

Total investment into the small-scale military development cluster was around 35 million euros in 2024, and may reach perhaps 100 million in 2025, a funding still substantially below capacity needs.[118]

Domestic industry supplies around 40 percent of Ukraine's military equipment needs, and a majority of new contracts goes to local industry.[119] It is assumed that lack of funding forces the defence industry to produce at only 30-50 percent capacity, with potential to scale up and advance new solutions to production.[120] Among other things, it is believed that enough funding may double drone production from 4 million to 8 million drones annually. Thus, the industry may produce a significant part of the increased equipment requirements for many kinds of weaponry, if Western funding is increased.

5.10 Conclusions

In wars of attrition, the party with the most human and material resources has an advantage. Although Russia has experienced heavy losses, it has the upper hand as long as access to resources is at the current level on both sides. Ukraine needs increased support to procure more within the full range of military capabilities, in order to succeed in the continued warfare. There is no single weapon system, or technology, that can meet their equipment needs. They have significant untapped production potentials within their own industry, but lack the means to fully exploit it. Likewise, there is need for standardisation, especially in drone production. Although Ukrainian forces have more relevant combat experience than the armies of NATO countries, they still need support to train new forces. They also need support in structuring tactical training to a uniform and high standard, especially for army forces. Ukraine needs to educate and train troops to a higher skills level than Russia if it is to succeed in the ongoing war.

If Europe maintains support at the current level, Ukraine will move slowly towards Scenario 1, eventually freeing up Russian military resources and forcing NATO to speed up rearmament along the eastern flank. After a Russian (partial) victory in Ukraine, the country will free troops and equipment from operations there, win time to replace and produce new materiel, and have significant forces of war-experienced veterans who are difficult to integrate into Russian civilian society. We believe, like many observers, that this will create significant risk of Russian aggression against Europe, preferably against the Baltic States, but with consequences in the Nordic. The pure military cost of rearmament in Baltic and Nordic countries is estimated at costs of 256 billion euros over four years, additional to current budgets. Necessary military

[117] This and the following analysis base don information from Norwegian and Ukrainian industry players.
[118] Information from group of Norwegian inveestors in the Ukrainian tech cluster, November 2025.
[119] Andrii Muravskyi, «Ukrainian defence industry covers 40% of armed forces' needs», Ukrainska Pravda, 30 May 2025. Economy Edition: "Ukrainian manufacturers cover 70 % of arms contracts value for country's military", Ukrainska Pravda, 7 August 2025.
[120] Information obtained during two independent trips to Ukraine in the summer of 2025.

support for the remaining Ukraine is also additional, to ward off further Russian attacks, This will demand European allocations and support of 425 billion euros over the four-year period, with European military resource use beyond current defence budgets totalling 681 billion euros over four years.

As we will see in Chapter 7, there will also be humanitarian and economic costs associated with a new wave of refugees and migrants if Russia advances, which will incur on Europe increased economic costs of 524-952 billion euros over four years in the event of a Russian (partial) victory in Scenario 1 (see table in Chapter 7.1). If Russia were to attack and occupy the Baltics and parts of the Nordic Arctic region, a war to liberate these countries would cost significantly more than the total cost of the war in Ukraine so far, including the cost of realising Scenario 2. This is likely to trigger full mobilisation in Russia, with the consequent risk of the use of nuclear weapons.

For the analysis of Scenario 2 with Ukrainian (partial) victory, we assess that by the end of 2025 Russia will observe a net decrease in operationally available battle tanks, a trend to intensify through 2026 given that the war continues. Part of reason for this trend may be the priority given to building up new forces to prepare for a war against NATO in Europe, but a significant part is likely due to a combination of heavy losses and reduced production capacity in the defence industry, following years of reduced government revenues, higher import costs, and reduced access to critical production inputs. We interpret this as an indication of a general challenge for Russian production of armaments during wartime, and believe that this production will decline through 2026. It is also an indication that Russia will have a lower offensive capability, although it will still have considerable combat power. This provides an opportunity for Ukraine to achieve a balance of force and stop Russian advances, and in time achieve sufficient combat advantages to enable re-conquering own territory with sufficient support from Europe. All kinds of armament systems are needed so that they can have a complete, integrated tactical system, and the quality advantage of Ukrainian forces may be translated into superior combat power.

Our estimate is that the necessary military resources will require a total European allocation and support of 278 - 439 billion euros in the first year to realise Scenario 2, depending on whether one seeks stabilisation of the frontline with some offensive capacities (the lowest 'Min' estimate) or superior combat power with the ability to win back occupied territories (the high 'Max' estimate). However, as we will see in Chapter 7, there are additional savings from the repatriation of some of the Ukrainian refugees in Europe, resulting in a total estimated European saving of 20 billion euros in the first year (see table in Chapter 7.2). Net European support for the full realisation of Ukrainian (partial) victory will thus total 258 – 419 billion euros in 2026. This will be reduced significantly in the coming years, so that the net support need will be EUR 522 - 838 billion over all four years. This is slightly less than just the increased refugee cost in Scenario 1 (524 – 952 million euros).

We find that there is large untapped potential in the European defence industry to deliver the support. Less than 10% of today's European arms exports go to Ukraine. However, political will is necessary to override commercial interests, force manufacturers to push customers down the priority list, and await deliveries until after Ukraine's needs are met. This will cost in the form of compensations, but is entirely possible. A confiscation of Russian funds in Europe will cover about half the total cost.

6 Economic analysis

In this chapter, we analyse economic developments in Russia and Ukraine, to validate the assessments about Russian production capacity in Chapter 5, and to assess Russia's future capacity to rearm and increase military capabilities. We analyse the countries' access to resources. but take for granted - in line with our view in Chapter 5 - that Ukraine will be provided with sufficient funding from allies to continue the defensive war. We estimate economic growth in Russia over the next three years, and examine the significance of continued sanctions. Finally, we make an assessment of whether larger, covert trade between Russia and China is likely taking place.

6.1 Economic resources

Since 2022, Russia and Ukraine allocate increasing shares of value creation and budgets for warfare. The ability to increase military resources will determine the outcome of the war. Particularly important is the ability to produce arms, pay personnel, and ensure efficient logistics. A large economy with varied production and plentiful access to credit may endure costly warfare over a long period of time.

Our knowledge of Russia's economy rests on uncertain statistical foundations. Russian authorities have a motive to manipulate economic data in order to mislead opponents, or give Western allies the impression that support for Ukraine is futile. Several hundred statistical time series that were previously published, have been removed, including data concerning demography, economy, living conditions, etc.[121] Data still published are part of a propaganda war and must be interpreted critically. Since February 2022, previously stable correlations between official statistics and third-party information, which Russian statistics authorities cannot manipulate, have vanished.[122] The country has also closed websites to foreign visitors, and removed important independent sources.[123] We have a handful of researchers on Russian economy in each of Norway and Finland, and a few dozen in Sweden. Only the Swedish academic community has the capacity to study the Russian economy in all its breadth, while other Nordic academic communities conduct research on limited topics.

Before 2022, Russia had three times the population and a value creation almost ten times greater than Ukraine's.[124] The country accounts for ten per cent of global oil exports and has supplied up to thirty percent of Europe's gas. In the long term Russia has the potential for significant civilian and military development, particularly if oil and gas prices rise. Military resource use in Russia is more than 100-150 billion euros annually, and perhaps even greater if there is a bank-funded rearmament scheme out of

[121] Rina Nikolaeva, «Disappearing Data: How Russia Has Buried Key Wartime Statistics,» *Worldcrunch,* August 18, 2025,
[122] Oleksii Plastun and Anna Vorontsova, "Illusion of Stability: Never Trust Russian Stats," *VoxUkraine,* December 25, 2024,
[123] Two examples: It is no longer possible to obtain a full overview of court rulings for foreign Internet users, and the Romir Institute's alternative economic calculations have been removed from the Internet.
[124] Measured in USD and converted using market exchange rates. The difference was about 1:7 measured by international dollars, purchasing power-adjusted figures (PPP).

budget – even if not all of this military spending is used for the actual warfare. In comparison, Ukraine's defence costs were about 60 billion euros in 2024.[125]

Ukraine is strengthened by abundant foreign credit and a relatively broad business sector, but suffers from constant Russian destruction of infrastructure, and limited production in the arms industry. Our delegations in Ukraine in 2025 revealed that the arms industry has an estimated 50-70 percent spare capacity, mainly due to a lack of funding. Ukraine made negative experiences in 2022 with financing costs through overt monetary financing, which resulted in inflation and other economic imbalances.[126]

The costs of ongoing repairs of war destructions are considerable. There is also a risk of power shortages if another nuclear power plant is occupied or neutralised. Ukraine is exposed to targeted Russian bombing of energy and infrastructure, but after a large drop in value creation in 2022, the Ukrainian economy and tax revenues have again grown since 2023. In particular, the defence industry has expanded, Ukraine is self-sufficient in drones and is likely to start production of artillery ammunition, battle tanks and air defence in the near future. Ukraine is completely dependent on importing many arms and high-tech, and many input goods for the drone production are imported from China.

Ukraine is also dependent on allied financial and military support. Half the military budget is still covered by Western loans and contributions. In the future, NATO countries may partly account Ukraine support under their defence spending, in light of the NATO target of spending 3.5 percent of GDP on military defence. The German *Kiel Institute* recorded a decrease in funding for Ukraine in the summer of 2025, as a result of the loss of US allocations. Nevertheless, we believe that European countries will be fully able to secure funding for Ukraine in the coming years, not least after progress has been made in the use of frozen Russian assets as collateral for long-term loans in favour of Ukraine.

Russia is strengthened by a large and broad armament industry, which has constantly expanded. Two factories have now been established to produce attack drones, and constant attempts are being made to substitute imported goods with domestic production, with varying success. The country's ability to mobilise military personnel is still formidable. Despite sanctions and the absence of credit, Russia has funded 3.5 years of intense warfare. However, this is not uncommon - blockades and lost trade are normal in war, and Russia has not experienced very large destruction of production equipment on its own soil from this war. Compared to previous experiences, the full-scale war in Ukraine is not particularly devastating for Russia, and it has not lasted longer than similar major wars in recent times. In principle, Russia, with its enormous domestic natural resources, can keep the war going for at least ten years, but the country's growing and well-known structural weaknesses are making this less likely.

Russia is hampered by its dependence on oil and the absence of foreign credit. Russia has a surplus of energy and raw materials, but lacks high-tech and a number of more advanced inputs to production. When the country lacks trade credit, the amount of imports is limited by export revenues. Over the past three years, Russia has faced six major setbacks: Broad sanctions reduce oil revenues and increase prices on imported goods, the country's foreign exchange reserves abroad have been frozen with the

[125] George, et al., *Trends in World Military Expenditure, 2024.* Ruslan Bortnyk and Oksana Krasovska, *Economics of the Russian–Ukrainian War (2022–2024): Analytical Review.* (Kyiv: Ukrainian Institute for Applied Macroeconomics (UIAMP), 2025). https://uiamp.org/en/economics-russian-ukrainian-war-2022-2024-analytical-review
[126] Information from a meeting with political leadership in Ukraine's Ministry of Finance, July 2025.

result that the central bank is more dependent on raising interest rates, gas exports are significantly reduced, declining exports are reducing government revenues, the government has probably used up half of the remaining fund reserves, and emigration and war losses are resulting in a shortage of labour that reduces economic efficiency and growth prospects. The combined effects over economic over-heating and sanctions on input supplies may have reduced production of the arms industry.[127] Still, the regime's resolve to enhance military production and keep expanding its capacities for war, seems unchecked.

Leading economists estimate that Russia's liquid foreign exchange reserves will be depleted in 2026.[128] Most observers now believe that the official inflation rate of 8-10 percent is underestimated and could be significantly higher. If correct, there may have been continuously low and/or negative economic growth (recession) in Russia since 2022. Economic growth is calculated in terms of volume, and the figure depends entirely on the projected rise in prices. If the official statistics show an artificially low price growth, while the value figures (price times volume) are correct, then accorded volume growth must by definition be artificially highs. The volume figure (= economic growth) cannot be directly observed, as it is a figure estimated by the Russian Bureau of Statistics (RosStat). We deduct growth rates for Russia's economy for 2022–2026, based among other things on more realistic inflation rates than the official ones.

Today, almost no Western economists believe that the Russian economy is well-balanced, innovative and growth-oriented. Discussions focus on whether the country is heading for an imminent banking crisis, or whether the many imbalances may "only" trigger more gradual problems such as new government defaults on debt, burdensome tax increases, confiscation of people's savings, high inflation, rationing, etc.

Russia's budgets for the military and security sector, including the war in Ukraine, are not fully accessible via the budget process, but it is estimated that due austerity needs the country will see stagnant defence and security budgets in 2026, and a reduction of available military resources in 2027 and 2028.[129]

6.2 Russia's economic development

The prevailing view of Russia's economic prospects during the war and sanctions has gone through three phases. In the first half of 2022, many economists and analysts predicted that the sanctions would result in an imminent and sharp decline in value creation. The IMF estimated in April 2022 that Russian GDP would decline by 8.5% that year. From the autumn of 2022, a new perception spread that this analysis was flawed, and that the Russian economy fared far better than expected, undoubtedly motivated by the high oil and gas prices throughout that year.

In 2023, some researchers pointed out three more fundamental imbalances – the depletion of the pension fund, the reduction in imports and exports, and the high inflation. Most experts nevertheless believed that Russia did surprisingly well and could continue the war for a long time. It was not until late 2024 that several economists began to point out larger imbalances, and many now agree that Russia's

[127] *EuroMaidan Press*, «Frontline Report: Tank production in crisis as Russia's war economy hits the wall», 18 November 2025.
[128] "Liquid" means that an asset (cash or securities) has a maturity of 12 months or less (can be redeemed within one year). Assets with a longer maturity (long-term receivables) are considered "non-liquid".
[129] The Moscow Times, «More Taxes for More War: Unpacking Russia's 2026 Budget,» *The Moscow Times*, October 7, 2025,

economy is struggling on several fronts, burdened by war and sanctions. Researchers at the *Carnegie Russia Eurasia Center* had a positive view of the Russian economy for a long time, but postulated in December 2024 that budget and credit growth herald stagnation.[130] Independent experts and Russia's minister of economy stated at the end of June 2025 that the country is on the verge of recession.[131]

Inflation is probably markedly higher than official figures. Policy rates and bank rates are very high, whereby official inflation figures imply a real interest rate far above other countries.[132] There is a shortage of labour. Civilian industry and agriculture struggle with profitability, recruitment and high interest rates. The pension fund's liquid reserves may be depleted in 2026. The economy is overheated with high public spending on warfare, explosive wage costs for soldiers and the war industry, and associated manpower issues in agriculture, civilian industry, and freight. Costs of widow's pensions and housing allowances have increased, while ambitious targets for tax revenues are not met. The state subsidises military industry by low interest rates, thus crowding out civilian production. In addition, there is high growth in transfers and state subsidies to minority areas and occupied territories, especially the Donbass region where there is an enormous need for reconstruction.[133]

Expansion of the military industry, which is largely state-owned, crowds out the part of the economy that responds to market signals and price mechanisms. Ukrainian intelligence has estimated that the military budget spending in Russia in early 2025 were 5 billion dollars above set ceilings.[134] Even more, Russian arms exports are failing, partly due to own needs in warfare. While the country accounted for 21% of global arms exports in 2015-2019, these exports dropped by 64% to a market share of just 7.8% in the period 2020-2024, with declining sales to China, India, and ex-Soviet countries.[135] This hampers the industry's revenue base when oil prices fluctuate.

Craig Kennedy at Harvard University believes that Russia is engaged in covert financing of the war industry, out of budget, through explosive credit growth among banks.[136] Researchers at the *Stockholm School of Economics* believe that credit growth poses a major systemic risk to the banking system.[137] Critics of Kennedy point out that the Russian central bank's data does not support his findings.[138] In the summer of 2025, new signals emerged over imbalances in the Russian banking system.[139] Leading Swedish economists consider it likely that an ongoing, government-guaranteed credit growth via banks may contribute to a monetary crisis in the form of a "bank run", accelerated by rising house prices, high interest rates, high inflation, and capital controls. Such scenarios could ultimately trigger economic

[130] Alexandra Prokopenko, Russia's Economic Gamble: The Hidden Costs of War-Driven Growth, *Carnegie Politika,* 20 December 2024.
[131] Javier G. Cuesta and Ignacio Fariza, «Russia on the Edge of Economic Collapse after 40 Months of War,» *El País,* July 7, 2025.
[132] Before February 2022, the real interest rate with official figures was around 0 percent, since then it has moved around 10 percent. If one assumes that the real interest rate in Russia in recent years has been roughly on a par with historical levels, this indicates that real inflation is closer to 20 per cent.
[133] Vjerstka, «Distribution of budget funds to regions. Plan for 2026» *Telegram*, 1 October 2025,
[134] Volodymyr Savchenko, «High interest rate, low growth: Kremlin tries to hide crisis,» *The Ukrainian Review,* May 27, 2025,
[135] George et al., *Trends in International Arms Transfers, 2024*. Stockholm Institute of Transition Economics (SITE). *Financing the Russian War Economy.* (Stockholm: SITE, 2025). ; Khrystyna Holynska. «Something is rotten in the state of Russian arms industry.» *RAND,* August 7, 2024. Mercator Institute for China Studies (MERICS). «China-Russia Dashboard: Facts and figures on a special relationship.» *MERICS,* 2025.
[136] Craig Kennedy, "Russia's Hidden War Debt," *Navigating Russia (Substack),* February 14, 2025,
[137] SITE, *Financing the Russian War Economy*.
[138] Peter Mironenko, "No: Russia Is Not on the Verge of a Banking Crisis," *The Bell,* January 17, 2025,
[139] Maria Tril, «Russian Banks Fear Debt Crisis Is Coming as War Strains Economy,» *Bloomberg,* June 26, 2025,

collapse if the shift of resources towards a war economy continues.[140] In December 2024, one in four Russian shopping centres reported risk of bankruptcy.[141] There are also risks associated with large loans from banks to military manufacturers, because the announced reduction in military spending will deprive many such manufacturers of revenues and reduce their ability to service their current loans.[142]

6.2.1 Economic growth and artificially low inflation figures

International guidelines state that public production of weapons and ammunition provide a GDP contribution equal to the cost of production.[143] Growth in this «industry» requires labour and real capital, at the expense of value-creating civil production and/or other public activities. Alas, rearmament results in GDP growth that may conceal long-term problems. Reallocation of resources to military production, high interest rates and high inflation mean that the business sector is being squeezed ("crowding out").

Russian authorities are unable to substantially lend abroad, due to financial sanctions. In the absence of a productivity miracle, it means that war needs in the short and medium term can be satisfied by:

1. Using state savings. Several economists estimate that liquid assets in the pensions fund are likely to be depleted in 2026. In the autumn of 2025, the total fund increased, but not the short-term (liquid) part.[144] Budget deficit is estimated to reach 65 billion euros in 2025, and 43 billion euros in 2026.[145]

2. Increasing the government's domestic borrowing. The Russian Ministry of Finance issued new loans of 4 trillion rubles (35 billion euros) on October 17, 2025, but it is uncertain whether such loans will be fully subscribed in the near future. Domestic borrowing is limited by the fact that the general public and businesses already face high debt and high interest rates.

3. Increasing the tax burden. This is ongoing in Russia, with significantly higher tax burdens levied to fund the war.[146] Tax increases in 2026 are estimated to bring in up to 32 billion euros annually.[147] In the autumn of 2025, VAT was raised from 20% to 22%, with lower deductions for small businesses.[148].

4. Tightening the command economy, rationing and forced labour. Emigration in 2022 may to some extent be remedied by labour immigration from China or North Korea, but immigration from Central Asia has in recent decades been met with considerable political resistance.[149]

5. Monetary expansion ("printing money"), which will further increase inflation, with increased pressure on already high wage demands and interest rates.

[140] SITE, *Financing the Russian War Economy.*
[141] The Moscow Times, "One in four shopping malls in Russia is on the verge of bankruptcy," *The Moscow Times,* 18 Dec 2024.
[142] The Moscow Times, «Russia Faces Surge in Corporate Bankruptcy, Experts Warn.» *The Moscow Times,* 28 January 2025,
[143] There is an old discussion in the academic community as to whether public arms production and associated personal use are to be regarded as value creation (see, for example, Simon Kuznets, 1944).
[144] Kommersant, "The volume of NWF increased by 62 billion rubles in August," *Kommersant*, September 3, 2025,
[145] The Moscow Times, «More Taxes for More War: Unpacking Russia's 2026 Budget.»
[146] Alexandra Prokopenko, «New Budget Confirms the Russian Public Is Paying for the War,» *Carnegie Politika,* 1 Oct 2025.
[147] The Moscow Times, «More Taxes for More War: Unpacking Russia's 2026 Budget.»
[148] Tatyana Rybakova, "How the Kremlin Decided to Sacrifice Small Business to Pay for War," *The Moscow Times*, 9 Oct 2025.
[149] Niginakhon Saida, "Russia Still a Cold Front for Central Asian Migrants." *The Diplomat,* November 5, 2024.

Finally, the state may also further reduce transfers to welfare schemes, as seen throughout the war years, except for soldiers' benefits. New cuts in health, district and energy budgets are presented in the budget proposal for 2026.[150] In the long run, these solutions will be detrimental to the economy's growth prospects, which will again negatively affect the ability to wage war.

In the first half of 2025, we observe a continued decline in imports, including of war-critical intermediate goods. The price of Ural oil moved below USD 50, while the 18th EU sanctions package lowered the price cap to just under USD 48. Growth in manufacturing output was sharply reduced in January 2025, and negative in February.[151] At the same time, there are more and more reports of bankruptcies, including one key business within Roscosmos.[152] In May 2025, Gazprom announced that it will not pay dividends due to doubled debt costs. Gazprom's management has openly criticised the central bank's high interest rates. Several military producers are reported to reduce shifts and production towards the end of 2025.[153]

This spring, the official growth forecast for 2025 was revised down to 2.5%. The IMF has since lowered its forecast to 0.9% growth in 2025, while the Russian central bank predicts 1-2%. In the autumn of 2025, the Russian government itself estimates only 1.5% economic growth in 2026.[154]

The level of economic growth depends on the inflation figure, and it seems implausible that inflation is only 8-10%, an official figure that was increased to 13.5% this summer but was again reduced to 8% in October 2025. Since 2021, the independent Romir Institute's inflation figures have been clearly higher than official data.[155] Until the first quarter of 2022, the gap between the two was rarely more than a few percentage points, and there was a strong positive correlation between them. But since the full-scale attack, the deviation has increased significantly - Romir's figure has each month been 10-15 %p above the authorities' figure.[156] This results in very different price trajectories over time, as Figure 9 shows.

The publications from independent Romir came to an abrupt halt shortly after they were quoted in the autumn of 2024 in *"The Russian Economy in the Fog of War"*, a report by the Stockholm School of Economics.[157] Based on Romir's figures, they estimated actual inflation in Russia to be far higher – and real GDP growth far lower – than official statistics indicate. At the time, RosStat projected economic growth for 2023 to be 3.6%. Using Romir's inflation figures, growth was -8.7%, i.e. a sharp decline.[158]

There are also other factors indicating that inflation is higher than the official: the high policy rate, the *Olivier Index* of selected food prices, banks offering deposit rates to private individuals of 27%, and US calculations of inflation in war-important imports that may have reached many hundred percent.[159] The central bank's reduction of the policy rate in 2025 from 21 to 18 percent, and then to 17 percent and 16.5

[150] Agenstvo, «The Russian authorities have cut spending on every third state program,» *Telegram*, September 30, 2025,
[151] Savchenko, «High interest rate, low growth: Kremlin tries to hide crisis»
[152] Kerry Harrison, «Russia's Soyuz Maker Company Is Crashing Under Debt and Delays.» *Orbital Today,* August 29, 2025,
[153] *EuroMaidan Press*, «Frontline Report: Tank production in crisis as Russia's war economy hits the wall», 18 November 2025.
[154] Vadim Vislogusov, «Budget sent to Okhotny Ryjad,» *Kommersant*, 30 September 2025,
[155] Here we are referring to the Romir Institute's FMCG deflator.
[156] MT, "Real inflation for Russians has exceeded 70% since the start of the war," *The Moscow Times,* 20 August 2024,
[157] Stockholm Institute of Transition Economics (SITE), *The Russian Economy in the Fog of War.* Stockholm, 2024.
[158] Belkin, Vadim. «Bargaining, Acceptance, Recession: Why It's Getting Harder to Deny Russia's Economic Downturn.» *The Insider*. August 6, 2025. https://theins.ru/en/economics/283807
[159] Olena Bilousova, Benjamin Hilgenstock, Elina Ribakova, Nataliia Shapoval, Anna Vlasyuk, and Vladyslav Vlasiuk, *Challenges of Export Controls Enforcement.* (Kyiv: KSE Institute, 2024). Unpublished presentation by the U.S. government at the G7+ Expert Seminar in Warsaw, May 2025, with projections of inflation for items on the *Common High Priority Items List*.

percent in October, despite a situation of "persistent inflationary pressures," is believed to be the result of political pressure and an undermining of the central bank's independence.[160]

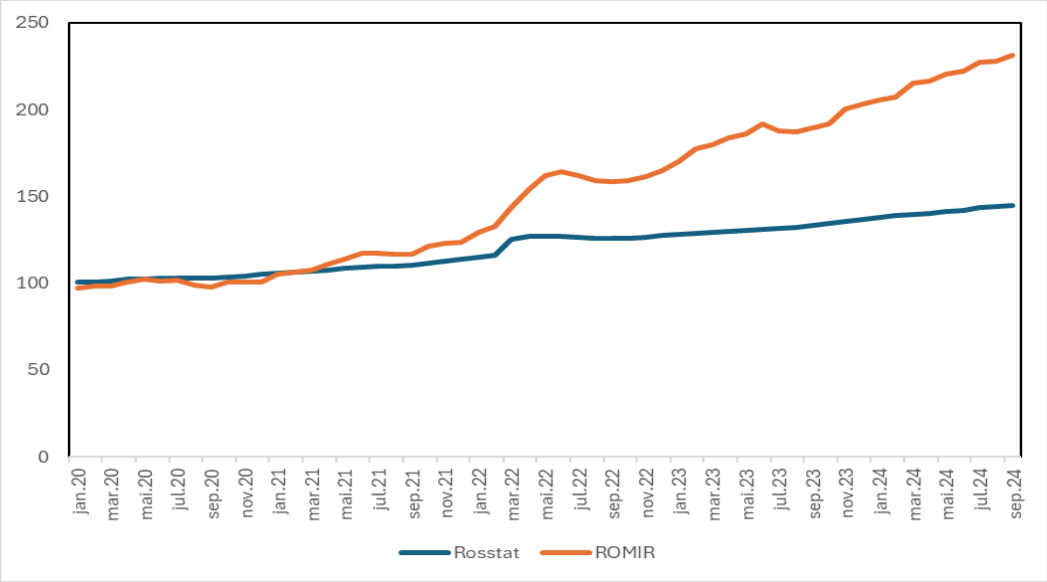


Figure 11: Developments in Russian consumer prices January 2020 – September 2024, according to official figures RosStat) and the independent ROMIR Institute. Index, 2019=100.

The low official inflation figures imply an average real wage growth in Russia around 10% annually and a real interest rate at 10-15%, which appears completely unrealistic. An overall historical experience from the 1st and 2nd World Wars is that countries at war footing communicate strong real wage growth, while later investigations often reveal large declines in real wages during war.[161] [162]

International fixed income markets price in the risk of sovereign default via the interest rate premium against the risk-free rate, in practice expressed through the price of *Credit Default Swaps (CDS).* In early July 2025, the 5-year CDS price for Russia was 13.775%, implying a 100% risk of default. An important indicator of the market's belief in recession is the so-called "yield curve", or the difference in market interest rates on long-term versus short-term bonds. In early July 2025, the 10-year interest rate on Russian debt was 4.7%p higher than the 2-year rate, which is the highest level since spring 2022.[163] This is an indication that the market expects a recession within the longer maturity of Russian bonds.[164]

Even a conservative estimate underestimates official inflation figures in Russia by at least 4-5 percentage points every year during recent years. This means that there must have been economic contraction (recession) over the past year, and perhaps every year after 2021. Figure 10 shows official growth figures, and our projection of economic growth under a more realistic inflation estimate. In our projections for Russia's economic growth for 2022–2027, inflation is estimated to lay between the Russian central bank's

[160] Tatyana Rybakova, «Russia's Central Bank Has Lost What Remained of Its Independence» *The Moscow Times*, 29 Oct 2025,
[161] Gerhard Bry, «Wages during War, Inflation, and Dictatorship.» In *Wages in Germany, 1871–1945*, eds. Gerhard Bry and Charlotte Boschan, 191–265. (Princeton: Princeton University Press for the National Bureau of Economic Research, 1960).
[162] The UK during World War 2 is an exception, where real wages grew somewhat.
[163] World Government Bonds, «Russia Government Bonds – Yields Curve,» n.d.,
[164] Martin Sandbu, "Sanctions on Russia are working," *Financial Times,* 12 June 2025,

figures and the projections from independent Romir. [165] In itself, this implies negative GDP growth for both 2023 and 2024. This is clearly lower than official figures, which show an annual growth of around 4%.



Figure 12. Developments in GDP volume growth in Russia. Official figures w/forecast from the IMF (red line), seen against our estimates for historical figures and forecast for 2025-2027 (blue line)

Based on, among other things, the improvement in labour force participation from 2023, which appears fairly credible, we adjust these projections somewhat upwards, and conclude that economic growth will be around 0% in both 2023 and 2024. This is still a conservative estimate. We also make forecasts for 2025-2026 based on current oil prices, oil futures, and the new dynamic EU price cap. Here, we assume an achieved price for Russian Ural oil around USD 50 in 2026. This informs our projection for economic growth in Russia in the six years following the full-scale attack, as illustrated in Figure 12.

It is difficult to trust the official figures for economic growth in Russia. In addition to the price context, we take into account a number of independent sources on the Russian economy, including foreign trade as they appear from the data of Russia's trading partners. Overall, developments from 2022 indicate that the country's economy lacks capacities for growth. Increased tax burdens, persistently high inflation, high interest rates, and a production shift from private business to military businesses have hampered the Russian economy. Although the negative impulses have to some extent been counteracted by a sharply expansionary fiscal policy, the net effect is clearly negative.

We estimate that Russia has had zero economic growth in 2023 and 2024. For 2025 and 2026, the best forecast is that the Russian economy will shrink by 2 and 1.7 percent, respectively. This is not a collapse, but a clearly less rosy image of the Russian economy than official data imply.

[165] It is the GDP deflator, not the CPI, that determines the decomposition between price and volume in Russian GDP figures. We assume that the Russian GDP deflator is as underestimated as the Russian CPI after February 2022. This is a conservative assumption, because the GDP deflator also reflects price developments for some goods that are not consumed by ordinary households, particularly military equipment from heavy industry. These have accounted for much of the production growth since 2022, and price developments are not well known. It seems reasonable to assume that the rise in prices for military equipment must on average be at least as high as the rise in prices for consumer goods.

6.2.2 The importance of sanctions

From the start in 2014, the US was a driving force for sanctions against Russia, while the EU has introduced a more hesitant and gradual policy, characterised by disagreement between member states.[166] Areas where the US, and to some extent the UK, imposed sanctions earlier than the EU include imports of crude oil, diesel, natural gas, and LNG, sanctions against banks and ships in the shadow fleet, and secondary sanctions against companies in third countries. The EU chose a step-wise approach, perhaps guided by a belief that the threat of escalation of sanctions might influence Russian behaviour. A greater understanding is emerging in Europe that the sanctions do not affect Russia's actions or intentions, but they effectively reduce Russia's economic scope of action, and should therefore be stepped up to exploit momentum and tip the resource balance in Ukraine's favour.

The EU's 18th sanctions package in the summer of 2025 entailed a substantially reduced price cap, limits on gas imports, an import ban targeted by 2028, and blacklisting of several vessels in the shadow fleet. In September 2025, the Commission proposed a 19th package with further reduced price caps and phase-out of Russian oil and gas in 2027.

The most effective sanctions are the now near-universal sanctions against Russia's use of dollars and euros, which make all kinds of transactions demanding or even impossible. This affects everything from the imports of many goods where the seller demands settlement in Western currency, to third countries' repayment of debts to Russia. Financial sanctions de-facto shut Russia off from liquid foreign exchange reserves or borrowing abroad. Before 2022, Russia was the largest single borrower both in Chinese banks, and under *the Belt and Road* program.[167] From February 2022 to June 2023, Russia had probably borrowed at least USD 8-10 billion from Chinese banks.[168] This is still a modest supply of credit - equivalent to about one month's coverage of Russian imports from China - but if lending increases, it could have a real and positive impact on Russian financial stability. But reports from 2024 rather indicate that Chinese banks have halted transactions and we find no signs that new credit is being granted.[169]

From lack of credit and hard currency, there were already signs by the end of 2023 that Russia's trade was being pushed into a reciprocal barter situation, where the country's imports depend on prior exports and trade balance in each currency.[170] In the spring of 2024, Russian authorities drew up a guideline for barter, which continued throughout the year.[171] This means that export revenues directly control import opportunities, so that a further tightening of sanctions on Russian oil, gas, or the shadow fleet, could have a direct chilling effect on the country's ability to import.

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[166] Stephanie Baker, *Punishing Putin.* (London: HarperCollins, 2024), 27, 217–220.
[167] Sebastian Horn, Carmen M. Reinhart, and Christoph Trebesch, "China's overseas lending and the war in Ukraine." In *Global Economic Consequences of the War in Ukraine: Sanctions, Supply Chains and Sustainability*, ed. Luis Garicano, Dominic Rohner and Beatrice Weder di Mauro. (London: CEPR Press, September 2022).
[168] Joseph Wilkins, «Russia is becoming increasingly dependent on Chinese banks as its yuan borrowings more than quadruple,» *Business Insider,* September 4, 2023,
[169] Huileng Tan, "Russia is having a harder time doing business globally with new sanctions, as some Chinese banks are returning payments for goods already shipped," *Business Insider*, August 30, 2024.
The Moscow Times, "Bank of China Halts Payments With Sanctioned Russian Lenders," *The Moscow Times*, June 24, 2024,
[170] Erlend Bjørtvedt, *Corisk: Sanctions of Russia – Warsaw G7 Jan 2024 Conference Presentation*. (Oslo: ResearchGate, January 2024).
[171] Javier G. Cuesta, "Russia turns to bartering," *El País,* December 7, 2024. Topcor, «Barter 2.0: Can Russian foreign trade move away from using the dollar,» *Topcor,* June 28 2024.

Sanctioning of individual vessels in the shadow fleet has probably had a major effect, with gradual expansion in the autumn of 2024 and the first half of 2025. This made many third countries reluctant to allow port calls for shadow vessels, and Russia's lack of reserves makes the country unable to establish an alternative insurance scheme that port states may accept. Together with decline in prices, this has increased importers' bargaining power, and probably less than half of Russia's oil exports are now transported by the shadow fleet, the remainder on conventional ships with Western insurance. Russia has acquired ships worth more than USD 8 billion, but sanctions may have put a third of its fleet out of service. The EU pushed prices further down with a price cap of USD 48 through the 18th package. US shipowners will likely have to follow the European maximum price to avoid the loss of insurance or exclusion from European markets. We consider that this new measure reduces Russian oil revenues by a further up to 20 percent, reducing the country's total export revenues by about 10 percent.

The sanctions against the export of war-relevant goods to Russia have been less effective in themselves – a number of analysts have demonstrated how digital components and "dual-use" goods continue to flow to Russia in various places along the country's 22,000 kilometre border. But sanctions make shipping more expensive and increase prices from middlemen who demand risk premia for smuggling and bribery along the way. Sanctions, and the closure of the EU's eastern border in 2024, have driven shadow trade eastwards and increased average freight costs from a respectable 4 percent of import value in 2021, to a whopping 11 percent cost in 2024.[172] This means that as much as 11 percent of the importer's price covers shipping and other related costs, while the remaining 89 percent of the import price yields ever less goods due to various additional price markups from the chain of intermediaries.

In nominal terms, since the peak years of 2021-2022, Russia has seen monthly exports decline by 25-35 percent, and imports by about 15 percent, in nominal terms.[173] Imports further stagnated in the first half of 2025, and with very high inflation and freight costs on sanctioned imports in particular, imports declined even more when measured in real value (quantity of goods). Since 2023, Russia has reduced its imports of even the most war-critical goods, such as digital components and refined metals for arms production (see Chapter 5).

If the US phases out sanctions against Russia, Russia will experience an improvement in some areas, while other European sanctions will continue to have major effect. In an analysis presented by KSE in June 2025, economist Benjamin Hilgenstock assessed that US sanctions against the use of dollars are very important and cannot be replaced to any great extent by similar sanctions from the EU, while the EU can unilaterally and significantly damage the Russian economy through confiscation of assets, sanctions against the shadow fleet, bans on the purchase of oil or gas, commodity sanctions, and sanctions against companies and individuals.[174] If the US were to allow trade with Russia, US companies would find themselves in a position where they would violate EU sanctions in the same area, and risk exclusion from the European market. This mechanism could prevent a substantial resumption of Russian-US trade, with the exception of smaller niche companies that do not operate in Europe.

[172] Bjørtvedt, *Russia's Foreign Trade and Trade Costs 2019–2024.*
[173] Based on 170 trading partners' export and import data: Bjørtvedt, *Russia's Foreign Trade and Trade Costs 2019–2024.*
[174] Benjamin Hilgenstock, at the Stockholm Institute of Transition Economics, "Sanctioning Russia: Tools & Challenges in a Changing Geopolitical Order," SITE, June 23, 2025, 2:09:10, https://www.youtube.com/watch?v=Uz25SOXD0KQ&t=4238s

6.2.3 Covert trade between Russia and allies

Reported Russian trade with Iran, North Korea, Venezuela and Cuba is very small, almost no trade at all is recorded with North Korea. This implies covert trade that evades reporting, and it supports reports of an "Axis of Evasion" where those countries seek to deepen their trade in secrecy, outside of sanctions regimes.[175] In a relative sense, trade with such weak, allied economies is unlikely to be very large. In a period with available data (2019-2021) Russia reported an average of $65 million in monthly imports from Iran, $0.3 million from Cuba, $0.1 million from North Korea, and no imports from Venezuela. These countries' total imports from Russia averaged USD 183 million per month. Since 2022, North Korea has supplied up to 6 million units of artillery shells, while Iran has supplied missiles and drones. It must be assumed that covert exports from such countries to Russia are of a predominantly military nature and should be reflected on the battlefield.

Some analysts believe that there is a hidden Chinese export to Russia of large magnitudes, which is not captured by Western analysts or intelligence. Hidden military trade has been revealed by, among others, the *C4Ads* network by advanced data analysis.[176] It is likely that China benefits from a protracted war in Ukraine, as it may help reduce European capabilities in Asia, splitting the West's strategic focus and alliance.[177] In addition, Russia and China have significantly stepped up joint military exercises.[178] The question is whether China supplies Russia with weaponry, ammunition, components or other relevant dual-use goods on a scale exceeding normal trade, with real significance to the war in Ukraine. There has been speculation of significant unregistered trade via countries in the Eurasian Economic Union (EAEU) and directly from China to Russia, using small local banks and cryptocurrency.[179] Experience in circumventing sanctions against Iran via the regional *Bank of Kunlun* may have provided useful learning as Sino-Russian transactions seek to resist US sanctions.[180]

The countries of Central Asia have allowed, and openly recorded, a significant increase in trade. Georgia and Kazakhstan keep extensive records of trade and border crossings, and for Georgia this corresponds well with an increase in Western exports to the country, and with Georgian road traffic data. The strong growth in officially reported Chinese exports to Russia, both directly and via third countries, shows that even China has not seen any need for systematic concealment of trade.

A number of studies have shown that the most advanced and critical goods, such as machine centres (CNC), ball bearings or semiconductors, must be Western or, alternatively, Chinese, to provide sufficiently high quality for Russian arms production.[181] This means that hidden trade in Western goods must be found either in figures for Chinese production capacity, or in Western export figures. At a presentation at the *Stockholm School of Economics* in June 2025, Corisk presented two validations of Russian-reported

[175] Kimberly Donovan and Maia Nikoladze, «The Axis of Evasion: Behind China's Oil Trade with Iran and Russia», *Atlantic Council,* March 28, 2024.
[176] Naomi Garcia, "Open Secrets: Exposing PRC-Russia Wartime Trade," *C4ADS,* April 6, 2023,
[177] Mick Ryan, "China Wants Ukraine to Bleed," *Substack,* July 5, 2025.
[178] Hugo von Essen, «Joint military exercises signal deepening Russia-China strategic alignment,» *MERICS,* May 7, 2025,
[179] Angus Berwick and Ben Foldy, "Inside the Russian shadow trade for weapons parts fuelled by crypto," *The Wall Street Journal,* April 1, 2024. Aadil Brar, "Russia Suffers Punishing Fees to Trade with China: Report," *Newsweek,* May 24, 2024,
[180] Chen Aizhu and Shu Zhang, "Exclusive: As U.S. sanctions loom, China's Bank of Kunlun to stop receiving Iran payments," *Reuters,* October 23, 2018,
[181] Max Bergmann, et al., *Out of Stock? Assessing the impact of sanctions on Russia's defense industry,* CSIS, 2023.

imports against trading partner-registered exports.[182] One validation compared Russia's reported monthly imports of goods produced in Western countries, against monthly Western exports to Russia, and "excess exports" via 11 third countries. The validation showed no signs of Russian underreporting. A second validation compared monthly Russian customs-declared imports from three countries outside the Eurasian Economic Union - Turkey, Uzbekistan and the United Arab Emirates - less Russia's declared imports of goods produced in these countries, with the remainder indicating re-exports of goods that the countries did not themselves produce. This was compared with an estimate of Western "surplus exports" to the three countries. Again, there was an almost complete match, month by month. Russian reporting was 10-20 percent above an estimate based on Western export data, which is naturally explained by the fact that the three countries also re-export some goods from non-Western countries, primarily China.

In Figure 13, we now validate Russian imports from China by comparing Russian and Chinese trade reporting, and by checking whether growth in Chinese industrial capacity or Western flows of goods to China may indicate that real exports to Russia are significantly higher than reported. In current US dollars, we first present available monthly figures for Russian declared imports from China (red) and China's reported exports to Russia (yellow). The countries' reporting corresponds quite well, with somewhat higher Chinese values. We also present total Western exports to China (blue) [183] and total Chinese exports to the world excluding Russia (black). We present this as an index where May 2022 = 100, because we know from countless studies that noticeable Russian shadow imports started precisely in May 2022.

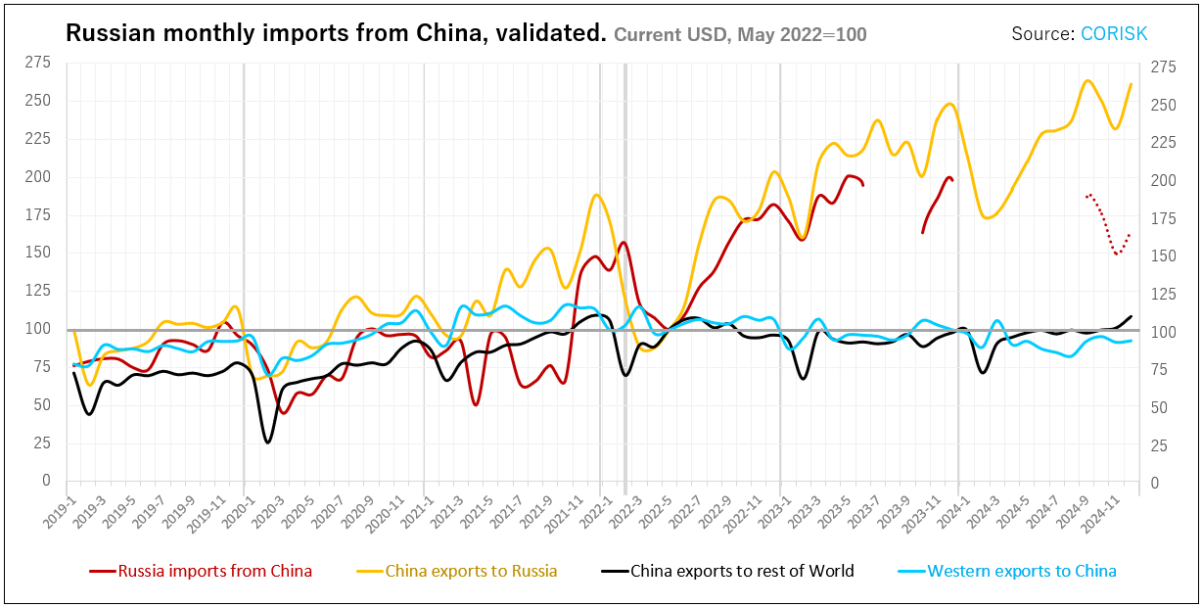


Figure 13: Monthly Russian imports from China according to Russian customs (red line) and Chinese customs (yellow line), as well as China's trade with the West (black and blue line). Sources: Corisk, based on Russian customs, Chinese customs, UN ComTrade.

We see that total Western exports to China (blue) declined by 10% since May 2022, while China's global exports excluding Russia (black) were stable without any nominal growth. This aligns well with the impression of low growth in China and the country's response to the COVID-19 epidemic, which lasted

[182] Stockholm Institute of Transition Economics, "Sanctioning Russia: Tools & Challenges in a Changing Geopolitical Order"
[183] Western exports represent the countries that are likely to produce advanced industrial goods and include the EU, EFTA, USA, Canada, Japan, Korea, Taiwan and Malaysia.

beyond 2022 after the rest of the world had lifted its restrictions. Note that Western exports to China (USD 70-90 billion monthly) are about 8 times higher than Chinese exports to Russia (USD 8-11 billion), so the Chinese loss of Western import goods is dramatic. Also note that Chinese exports to the world outside Russia are even larger, USD 200-300 billion per month, and thus a very important indicator of the strength of China's export industries. The patterns we find in the sections above correspond to findings in an analysis by the *Atlantic Council* from December 2024.[184]

The decline in these two indicators indicates that the supply of Western goods - which must have been important to a shadow trade scheme - declined significantly, and that China's overall exports stagnated. The first means that a hidden and large Chinese shadow export to Russia must probably have been covered with non-Western products, the second means that China must have prioritised increasing exports to Russia dramatically in a period when other Chinese exports did not increase, and when the economy was struggling with the after-effects and backlogs from prolonged pandemic measures. China's reported exports to Russia after May 2022 did increase by 150 percent. Russian customs reported a significant increase of the same magnitude. This reveal that China's exports to Russia increased very sharply, and that the two countries did not hide this trade expansion.

The trading via shadow banks and cryptocurrency has not been very large, reports suggest crypto trading via one vital platform amounting to less than $10 billion. If unregulated and unreported trade was agreed between the countries on a larger scale, we must ask ourselves why a control-focused regime like China did not hide more of the growing trade with Russia, a trade visible in official data. Experience with shadow trading with Iran, via the *Bank of Kunlun*, indicates that China may turn a blind eye to rogue banks setting up hidden trade schemes, but this will probably require the Chinese bank to be completely isolated from serving major or state-owned Chinese banks and companies – which in turn will require a network of shadow banks and limit the potential scope of shadow trading.[185] MERICS believes that the sanctions have strengthened China's bargaining power and finds limited upsides in increased Chinese imports from Russia.[186] We question why China would agree to conceal extensive trade when its magnitude is limited, when other exports stagnate, when it is impossible to provide credit to Russia on a larger scale, there is little evidence of a similarly large Russian export flow in return, and when such practices would have exposed China to significant risk to trust among other trading partners, and risk secondary sanctions that could affect the 20-30 times larger exports to others countries than Russia.

[184] Joseph Webster, «Trade data reveal the inner workings of Russia and China's defense industrial cooperation,» *Atlantic Council,* December 18, 2024,
[185] The German Marshall Fund of the United States, "China Global Podcast – Episode #78 – Ft. Yanmei Xie," *YouTube*, June 11, 2024, interview, 29:11, https://www.youtube.com/watch?v=Uz25SOXD0KQ
[186] Filip Rudnik, "China-Russia trade: asymmetrical, yet indispensable," *MERICS,* May 7, 2025,

7 Costs and conclusions

In this chapter, we calculate the total costs for Europe and Norway of the two scenarios. For each scenario we include the same cost elements: the cost of accelerated military rearmament in Europe beyond pre-existing plans, the cost of all financial and civilian support to Ukraine including the current level of support, and the cost effect of any increases or reductions in the flow of refugees from Ukraine. Correspondingly, costs are calculated for each scenario excluding current European defence budgets and re-armament plans, and excluding the current European cost of dealing with existing Ukrainian refugees in Europe. We focus only on fiscal and budgetary effects, and do not perform any estimates of the scenarios' further dynamic effects on investment, interest rates, price changes for defence equipment, etc. We only discuss some such dynamic effects qualitatively, without numerical analysis, to illustrate how each scenario can have additional beneficial or unfavourable repercussions.

7.1 Scenario 1: Cost of Russian (partial) victory

In the event of Scenario 1 with (partial) victory, Russia will be able to rebuild a more sustainable economy and further upgrade its military capability. This will be easier if oil prices and gas exports rise, to provide scope for accelerated rearmament. Russian liberalisation and continued fiscal stimulus may trigger growth figures of up to 5 percent annually for a shorter period, particularly if US sanctions are lifted, import inflation is curbed, and oil exports are given favourable conditions. With such economic growth, Russia will be able to rearm and pose a real threat to the Baltic countries and Poland within five years.[187]

With a more bearish oil price development, the process will contain an important paradox: Continuation of a war economy to ensure rapid rearmament will probably prolong and exacerbate structural problems that were already induced by the war economy. The country will probably have to go through at least 1-2 years of regaining a healthier peacetime economy, and earning the confidence of investors, before it can be expected to return to a more one-sided focus on military production.

The process will depend on three factors in particular: the revenue base from oil and gas prices, the fate of economic sanctions, and the extent to which Russia manages to acquire military resources from Ukraine. The latter is probably the least likely, while higher oil prices and a reversal of sanctions are more likely. A protracted war in the Middle East may result in a more permanent increase in oil prices, but the price cap and sanctions against the shadow fleet will then acquire renewed significance. It is important to remember that Russia's foreign trade naturally targets Europe and China, while the United States has always played a smaller economic role for Russia. Europe alone can curb Russia of revenues from gas pipelines and inflict significant losses on Russia, through sanctions against oil and gas purchases and shadow vessels. Europe has considerable power over global ship insurance and can pressure third

[187] Deutsche Welle, «Germany: Spy chiefs warn of increasing Russian threat,» *Deutsche Welle,* October 14, 2024,

countries to reject shadow fleet vessels. Europe controls almost all of Russia's foreign exchange reserves, which could be crucial for a faster Russian rearmament. Still, a reversal of restrictions on banking and dollar transfers would dramatically increase Russia's ability to trade with third countries and would constitute a major setback for Ukraine.

In the event of the most favourable possible development seen from a Russian perspective, with oil prices above USD 70 and renewed access to borrowing abroad, Russian military power will again pose a potent threat. The sanctions that Europe can implement without US support are, in particular, bans on oil and gas imports, measures against the shadow fleet, a unilateral European oil price cap, sanctions against individuals, and individual companies.[188] It is even likely that a US opening up for investment in Russia, or trade with sanctioned goods and companies, will have limited effect, because the US companies in question will then violate EU sanctions and may be banned from the EU market - likely to be more lucrative than Russia.

The *Kiel Institute for World Economy* has calculated that for Germany, the withdrawal of support to Ukraine, with associated Russian advances and westward expansion, will cost Germany 10-20 times more than maintaining the current Ukraine support level.[189] Costs accrue in the form of increased military spending, refugee flows, and loss of trade and investment opportunities in Ukraine. German costs of increased refugee flows were estimated in the range of 24 – 49 billion euros.[190] For the whole of Europe, we calculated the increased cost at 150-275 billion euros if the number of refugees doubles (Chapter 4). These costs are largely covered by the recipient countries, but some coordination may be expected.

Russian victory could pose both immediate and longer-term military challenges: In the short term, one can envisage that a collapse of Ukrainian defence lines, with more land being occupied or a peace process enforced under heavy Russian influence, could embolden Russian forces to relatively immediately continue their advance, for example via Belarus towards Lithuania and the Suwalki corridor. In the medium term, Russian advances may provide the country with Ukrainian military materiel or production capacity that may strengthen a further build-up of threats against Baltic and Nordic countries. The most important cost for Europe arises when adding the *time perspective* – if Europe must expand capacities and forces already by 2027, which NATO originally planned to be implemented by 2037, it means ten years of acceleration beyond plans, with a corresponding increase in budget costs. We will not estimate such costs conservatively, without including additional costs that would emerge if we performed a Net Present Value calculation of accelerated spending.

The cost of a military build-up in Northern Europe that deters Russian aggression, depends on the scale of Russian force deployment, and how European countries choose to organise their defence. While the 3.5 % military spending target provides a significant expansion of Northern European defence budgets, it is not a given that all countries will be able to meet the target in time, or that the new military capabilities will be effectively directed towards the prevailing Russian threats. We will therefore consider below the costs of deploying a force that has a probable capacity to deter plausible Russian attacks.

[188] Benjamin Hilgenstock, at: Stockholm Institute of Transition Economics, "Sanctioning Russia: Tools & Challenges in a Changing Geopolitical Order"
[189] Johannes Binder and Moritz Schularick, *Kiel Policy Brief No. 179: The Costs of Not Supporting Ukraine*. (Kiel: Kiel Institute for the World Economy, 2024).
[190] Binder and Schularick, *Kiel Policy Brief No. 179*.

In addition to the costs mentioned above, under Scenario 1, Europe will still have to support Ukraine with an amount somewhat higher than today. A victorious Russia will have limited motivation to comply with a peace agreement, and may carry out further attacks or bombings of civilians at any time. The rest of Ukraine will face increased social needs and costs with internally displaced people, and increased tax losses as more areas become occupied by Russia. We calculate that current aid to Ukraine, with compensation of US support, is equivalent to 79 billion euros and must be increased to a level closer to the support level for Scenario 2 (Ukrainian partial victory). We calculate a continuation of 80 billion euros in Western support fully covered by Europe, and an additional 20 billion euros in increased social support for the Rest of Ukraine's management of social challenges and internally displaced people.

With support to Ukraine as high as 100 billion euros, and costs for accelerated defence of the Baltics and Nordics reaching 88 billion euros in the first year (Chapter 5), the total military and related European costs of Scenario 1 with a Russian (partial) victory will reach **188 billion euros** in 2026. In Chapter 4, we saw that more than a doubling of Ukrainian refugees will increase Europe's costs for the reception, subsistence, and integration by 150-275 billion euros on an annual basis. Thus, Scenario 1 appears with total European costs estimated at **338 - 463 billion euros** in 2026. The costs of managing refugees will decrease somewhat over time, given that many will be able to reach higher labour force participation in nearby European countries, and a few may return to Ukraine despite Russian occupation of larger areas. However, experience from Europe and Norway suggest that integration into the labour force takes time, especially amid the current economic cooldown in Central Europe. A large new wave of refugees will likely overwhelm capacities for integration and employment, and increase other social costs, although some Ukrainians will be employed in the reception system itself. We estimate that the cost of refugees falls by 10% annually in the first few years. This gives the following cost estimates:

Billion euros, constant prices	2026	2027	2028	2029
Europe, support for remaining Ukraine	100	105	110	110
Military build-up, Europe	88	77	52	39
New Ukrainian refugees	150 - 275	137 - 250	125 - 225	112 - 202
TOTAL costs for Europe	**338 - 463**	**319 - 432**	**287 - 387**	**261 - 351**

If Scenario 1 occurs with a (partial) Russian victory, and Europe compensates all US support to Ukraine, we arrive at total European costs of 1,205 - 1,633 billion euros over a four-year period.

7.1.1 Costs for Norway of a Russian (partial) victory

The Norwegian defence budget of approximately NOK 103 billion in 2025, amounts to about 2.1% of GDP, while the spending framework - through the Armed Forces' Long-term Programme - will be increased to NOK 140 billion in 2030 (2.36% of GDP) as measured at constant prices, and expand further to NOK 166 billion in 2036. The investment (capex) framework will be increased from NOK 39 billion to NOK 80 billion

annually, and operations from NOK 61 billion to NOK 86 billion over the ten-year period.[191] Three brigades will be established, one in Finnmark which will be significantly mechanised , and one in southern Norway made up of reserves. The structure is significantly smaller than during the Cold War, and with experience from previous defence plans, it is uncertain whether the structure will be fully realised. The army is planned to be equipped with long-range precision fire from 2028, and with integrated NASAMS air defence from 2033. Brigades in the north will be partially mechanised and accommodate an artillery battalion by 2032, but the lack of a corps organisation, missile power, and air defence over the next eight years, indicates that the units will not be able to provide significant resistance in the event of an attack on Northern Norway from sea or through Finland.

For Norway, a Russian (partial) victory under Scenario 1 will entail risks of increased pressure on the Baltic Sea and the High North, with a need for accelerated strengthening of Norway's defence capability. For Scenario 1, Chapter 5.6 concluded needs to establish an additional, reinforced Norwegian-Swedish brigade in the Arctic, with associated support troops and materiel, air defence, sea drones, etc. We also concluded that there is a need for significant development of infrastructure and fortifications there and in Finland. We considered it reasonable that Norway covers its share of costs in the Nordic and the Baltics with NOK 300 billion over four years, of which NOK 90 billion in the first year.

Russian advances will result in increased refugee flows, areas in the east from Donbass to the Dnipro River are densely populated and Russian advances will result in new internally displaced persons (IDPs). Many may choose to flee abroad, especially if Ukraine's economy and welfare services fail. In Norway, the cost of receiving each adult Ukrainian refugee was estimated in 2023 at NOK 675,800 (58,000 euros) in the first year, and NOK 262,000 (23,000 euros) annually in following years.[192] Under the so-called introduction programme, each adult refugee received NOK 230,000 (20,000 euros) in support, or alternatively about NOK 285,000 (25,600 euros) in social assistance, in addition to housing allowance of NOK 50-100,000 (4-9,000 euros) depending on the number of children.[193] Further, there are costs for schooling, health care, etc. With a total estimated cost of NOK 500,000 (43,00 euros) per refugee in the first year, a more than double number of refugees in Europe could result in 100,000 - 150,000 new refugees arriving in Norway, with increased annual costs of NOK 50 - 75 billion (4.3 – 6.5 billion euros).

We estimate that in 2026, Norway will have to cover NOK 90 billion of Europe's accelerated rearmament, NOK 50 billion for accelerated rearmament in Norway within the adopted Long-Term Plan, and NOK 50-75 billion for increased costs with refugees, totalling NOK 190-215 billion. In addition, there will be need of supporting Ukraine with NOK 100 billion, additional to the legacy Norwegian defence budget of NOK 123 billion, bringing all related costs except current refugees, to NOK 413-438 billion in 2026.

We estimate the following total, annual Norwegian cost increases from a 3-year build-up of capabilities for a three-month defensive battle, in addition to the decisions in the long-term plan:

[191] Prop. 87 S (2023–2024). *The Defence Pledge - Long-term plan for the defence sector 2025-2036*, proposition to the Storting. Ministry of Education and Research/Ministry of Defence, 5 April 2024. .
[192] SME Norway, "Report on the employment of Ukrainian refugees: "Norway is doing a poor job"
[193] Sander Sebastian Amsrud, "This is what Ukrainian refugees get from NAV: Can say no to work," *Nettavisen,* November 13, 2024. Trond Lydersen, "NAV boss on support for Ukrainians – must well over NOK 500,000 in annual salary", *NRK,* January 12, 2024, h

Contributions, build-up of land forces in Baltic countries	NOK 60 billion	
Contributions, building up land forces in Nordic countries	NOK 30 billion	
Total, increased flow of refugees to Norway	NOK 50 - 75 billion	
Norway, ammunition + 3 months (3 years, annually)	NOK 30 billion	
Norway, Accelerated Missile Brigade (3 years, annually)	NOK 15 billion	
Norway, land and maritime drones (3 years, annually)	NOK 5 billion	
Total increased Norwegian costs Year 1	**NOK 190 - 215 billion**	**3.9% of GDP**
In addition to: Support to Ukraine Year 1	**NOK 100 billion**	1.9% of GDP
In addition to: Defence budget Year 1	**NOK 123 billion**	2.4% of GDP
SUM, defence-related expenditure Year 1	**NOK 413 - 438 billion**	**8.3% of GDP**

These costs are additional to the costs of current refugees, or the future rebuilding of Ukraine. The greatest direct economic loss following a Russian victory is the lost opportunities that Norwegian companies would otherwise realise as partners in Ukrainian reconstruction, repairs and renewals of energy grids, and other long-term investment opportunities. As an example of pre-war Norwegian value creation in Ukraine, Telenor's subsidiary Kyivstar was valued in 2010 at NOK 25 billion (USD 5.6 billion) and served 21 million customers at the time of the merger with VimpelCom.[194]

Norwegian exports to Ukraine of NOK 5 billion annually will probably cease, and the import loss may result in price pressure on food products where Ukraine has a particularly large market share, such as cooking oil and grain. Increased Russian assertiveness will probably put direct pressure on the Oil Fund's remaining investments of NOK 1.5 billion in Russia, and all investments in Russia will probably forever be lost. In the event of occupation of Kyiv and large parts of the country, private Norwegian investments in Ukraine will be lost. As of 2023, Norwegian companies had a total stock of direct investments (items with more than 20% ownership) of NOK 434 million in Russia and NOK 201 million in Ukraine, in addition to the portfolio investments with lower ownership stakes.

7.2 Scenario 2: Cost of Ukrainian (partial) victory

For Scenario 2, Ukraine demonstrated in 2022 its ability to win back large areas, when it receives sufficient support and equipment from allies. Since 2023, allies have reduced their support, while Russia has increased its war effort. Ukraine is nevertheless holding positions against one of the world's strongest military powers, with a support equivalent to only 0.1% of Western countries' GDP, suggesting the strength of the Ukrainian determination for defence, and the weaknesses in Russian military skills and leadership. It also shows that even a limited increase in support can tip the military balance in Ukraine's favour. If the Trump administration continues its depreciation of the US dollar, it will be cheaper for Europe to buy US weapons, considering the general price increase for military equipment that we have already discussed.

[194] Law Insider, "Kyivstar sample clauses," *Law Insider,* n.d., https://www.lawinsider.com/clause/kyivstar

From January 2022 to April 2025, the United States provided a total of 115 billion euros (an average of 35 billion annually), while Europe provided 154 billion euros (48 billion annually) including 61 billion euros via EU institutions. From April 2024 to April 2025, 40 billion euros were transferred from the United States and 54 billion euros from Europe. Only half of the support is military – 140 billion euros since January 2022, of which the United States has officially donated 60 billion euros in military aid – but the real amount may have been less due to the often high age and low quality of US equipment.[195] Of support in 2024, about 35 billion euros went annually to the Ukrainian government as direct budget support via EU and multilateral organisations, while the remaining 47 billion euros was direct Western military contributions, equipment donations, and other support programmes in addition to the direct budget support.

In Chapter 5.6, we estimated military and related costs for Europe under Scenario 2. To achieve various degrees of superior Ukrainian combat strength and enforce a peace solution on Ukrainian terms, without US financial contributions, allies must support Ukraine militarily with a total of 290 - 451 billion euros in 2026. Of this, multilateral organisations, Canada and Asian allies are assumed to retain their support of 12 billion euros, so that the European military support for Ukrainian victory will be 278 – 439 billion euros in the first year, within a spectrum where the lower end is the minimum level and the upper end is the maximum cost if all necessary equipment for victory is delivered in the first year.

Total costs will be lower, and decrease in the following years, due to reduced rearmament after a peace agreement, and reduced costs when Ukrainian refugees in Europe can return home. We estimate that the current costs with 4.5 million refugees are below150 billion euros, and that in the event of a Ukrainian (partial) victory, there will be a cost reduction of 20 billion euros in the first year and the same amount in the second year. The reason that the reduction is not estimated higher, is that a disproportionate number of refugees are assumed to come from areas that will continue to be under Russian control even after peace is concluded.[196] We also calculate, conservatively, a reduction in borrowing costs of 15 billion euros due to reduced country risk when Russia suffers losses and does not gain political and regulatory influence - cost reduction we present in the second year.

For Scenario 2, we thereby estimate the following annual costs for Europe in constant prices:

Billion euros, constant prices	2026	2027	2028	2029
Today's Western support for Ukraine	85	85	85	85
Additional military support	205-366	100-205	-10-15	-10-15
Funding from other allies	-12	-12	-12	-12
Reduced country risk, unallocated	0	-15	0	0
Repatriation of refugees	-20	-20	0	0
TOTAL costs for Europe	258 - 419	138 - 243	63 - 88	63 - 88

If Scenario 2 is to be realised, and we assume that Europe compensates for all previous US support, we will see total costs for Europe of 522 - 838 billion euros over a four-year period.

[195] Anastassia Fedyk and James Hodson, *New analysis from Economists for Ukraine: The cost of US aid to Ukraine is less than half the official figures*. (London: CEPR, 2025).
[196] In Chapter 4, we saw that relatively few have returned from Europe to a life as internally displaced persons in Ukraine.

7.2.1 Distribution of costs by country

In the previous section, we found needs of Europe to fund 258-419 billion euros in 2026, less funding from other allies, and cost savings. European governments must fund almost all Ukraine's needs for civilian and military assistance. This speaks in favour of confiscating frozen Russian assets, or applying more of them as collateral for loans to Ukraine. Another opportunity opens when European countries' support for Ukraine's defensive war is likely to be partially covered under the NATO's target for military spending. This implies that support to Ukraine will, to a considerable extent, entail costs that in any case would have to be spent on military defence , rather than crowd out other budget items.

In 2025, Europe has a value creation (GDP) of about 22,500 billion euros, compared to Russia's almost 2,000 billion euros.[197] This means that when Russia increases military spending by 1% of GDP, Europe may match that rearmament by allocating only 0.1% of its GDP. Here, we disregard adjustment for "military purchasing power parities", as developed by Australian professor Peter Robertson. Some researchers believe that comparisons against currency market rates often capture the differences one wants to measure, and that "military PPP" may result in overestimation of countries' defence resources.[198] Other researchers believe there are too many unknown costs to enable meaningful PPP calculations.[199] Without taking a position on these methodological issues, we apply market exchange rates, analyse the assumptions for material forces directly through known equipment prices, and then calculate the Western cost of equipping Ukraine to exceed Russia in combat power.

Military spending of 3.5% of GDP is equivalent to the current level in the United States, Poland, Estonia and Greece, but would imply a significant increase for many European countries. Several countries have a backlog of pledged support that has not yet been allocated, equalling up to 160 billion euros.[200] This testifies to challenges with the capacity to convert budgeting into actual investments and arms deliveries, or may indicate spending scope. For many countries, Ukraine support may be the most appropriate and strategically sensible channelling of defence appropriations in the coming years. Further, much political controversy over support to Ukraine has been avoided by providing EU-level support as loans.[201]

We assume that individual countries in Europe will compensate for the loss of US support and that the EU Commission will maintain its joint support schemes with 19 billion euros, so that individual European countries will have to bilaterally donate 239 – 400 billion euros in 2026. Bilaterally, Northern countries have so far donated 87.5 billion euros and other European countries 7 billion, i.e. the shares of donations are distributed 93:7. Northern Europe has much higher value creation (16.380 billion euros) than Southern Europe (6.090 billion euros). With the same distribution as before, countries in the north must increase their support by 195 - 346 billion euros in 2026, while southern countries must raise support by

[197] Measured at market exchange rates.
[198] M. Taylor Fravel, George Gilboy, and Eric Heginbotham, "China's Defense Spending: The $700 Billion Distraction," *MIT Security Studies Program (MIT SSP),* September 2, 2024.
[199] International Institute for Strategic Studies (IISS), *Military Expenditure: Transparency, Defence Inflation and Purchasing Power Parity.* (London: IISS, 2022).
[200] Torbjörn Becker, Anders Olofsgård, Maria Perrotta Berlin and Jesper Roine, *Swedish Ukraine support in an international context: Public finance effects and future scenarios*. (Stockholm: Swedish Fiscal Policy Council, 2025).
[201] Becker et al., *Swedish Ukraine support in an international context: Public finance effects and future scenarios*.

15 - 26 billion euros, but with considerably lower costs in the following years after a Ukrainian (partial) victory and a favourable peace agreement. Below, we show the current support per region, the additional cost of securing Ukrainian victory, and our proposed regional and Norwegian shares of the total burden:

billion euros, constant prices	Support given so far per year	+ Increase in Scenario 2 incl. compensate US	= New level for 2026	GDP 2024
EUROPE	48,0	210-371	258-419	22.500
EU, common	18,8	0	19	
Bilateral	29,2	210-371	239-400	
NORTH	26,4	196-346	222-372	16.380
Norway	3,0	15-28	20-31	445
SOUTH	2,1	15-26	17-28	6.090

Sources: Kiel Institute, Ukraine Support Tracker June 2025. World Bank Data.

The table shows that countries in Northern Europe must on average increase their contributions to Ukraine by 1000-1500 percent, to realise a (partial) Ukrainian victory. Many countries have limited scopes of fiscal action, and this is part of the reason why the EU has initiated a fund for the reconstruction of European defence capabilities. While all countries are to be lifted towards the NATO spending target of 3.5% of GDP (750 billion euros for Europe), the share of support costs for Ukraine to national defence spending may vary between countries.

For eastern and northern countries, aid to Ukraine may naturally make up a larger share of the NATO target scale-up, while countries further away from Russian areas of interest may less easily mobilise increased support for Ukraine. Studies show that military budgets and Ukraine support are lower, the further away from Russia a European country is located.[202] A compensation of US funds by 35 billion euros, 93% of which falls on Northern Europe, would increase these countries' total civilian and military aid to Ukraine from 26.4 billion to 235-386 billion euros, or from 0.16% of GDP to perhaps 2% of GDP.

With a full escalation of the Ukraine support, and Northern Europe funding 222-372 billion euros bilaterally or via expanded EU programmes, support for Ukraine could reach between 1.4% and 2.3% of the region's GDP, and up to 66% of the military spending scale-up under the NATO target would have to be allocated for the Ukraine front. Confiscation of Russian assets will reduce these costs considerably.

7.2.2 Costs for Norway

For Norway, scale-up to the 3.5% NATO spending target entails to increase military spending from the planned NOK 103 billion (8.8 billion euros) in 2025, or 2.05% of GDP, to an estimated NOK 176 billion (15 billion euros). The difference between the NATO target and the adopted Long-Term Plan is thus NOK 73 billion (6.3 billion euros) in 2025, equal to the amount Norway spends on military support to Ukraine in

[202] Becker et al., *Swedish Ukraine support in an international context: Public finance effects and future scenarios*.

2025. This is already an over-achievement on our "share" of the European support to Ukraine that we envisage under Scenario 2, if based on Norway's share of GDP. But Norway have also had large additional revenues, and a particularly vulnerable location near Russia with the associated greater benefit from support from the other border countries, and dependence on European powers when the US retreats from involvement. Based on Norway's strategic location, the costs of securing sea areas and oil installations, the need for special rearmament in the Arctic Cap and relative security losses if the US reduces its military interest in Europe, it is necessary for Norway to allocate more to European defence and to Ukraine, than countries further west and south that have less room for manoeuvre and less territory to defend and are located further away from Russia.

Under Scenario 2, the increased support to Ukraine that we deem realistic and necessary following the table above, will result in a need for Norway to support Ukraine with NOK 220-360 billion (19-31 billion euros) in the first year, corresponding to half the income under the fiscal rule and 4 times the current support level. The cost will be reduced noticeably already in the second year, and then rapidly declining towards NOK 100 billion (8.6 billion euros) annually. A more evenly phased accrual of cost over the four-year period would be preferable. The long-term real return on the Oil Fund is estimated at 3 percent but has been somewhat above this in recent years. In recent years, the government has also spent less than 3% of the real return ("oil revenue spending"), so that Norway now has scope for the share of investment needed to equip Europe against threats following a Russian victory in Ukraine. We agree with 47 leading Norwegian economists who believe that in extraordinary situations, the government can allocate money for defence and security beyond the fiscal rule.[203] Now, Europe finds itself in such a situation. The use of Norwegian defence budget funds in Ukraine also has the beneficial effect that it does not create much pressure in the Norwegian economy, and lays the foundation for various cooperations between Norwegian and Ukrainian defence companies.- an element in the "Norwegian model" for support.[204]

7.2.3 Confiscation of Russian assets in Europe

Through this chapter, we have assumed that Western loans secured by frozen Russian assets will be granted, without confiscation of the principal. Agreement was reached among G7 countries in October 2024 to apply the generated interest revenues of the assets as collateral for a $ 50 billion loan to Ukraine. According to analysts at the European Parliament, a growing number of experts have come to view an outright confiscation of the assets, as legally viable.[205] The assets count almost 300 billion euros, of which more than 190 billion deposited in the EU, 27 billion in Japan, 25 billion in the United Kingdom, 14 billion in Canada, more than 5 billion in Switzerland, and almost 4 billion euros in the USA. Euroclear in Belgium holds the largest deposit, with 185 billion euros, the remainder being held by private banks mainly in France (19 billion) and Luxembourg (10-20 billion) .[206] The assets of mainly in the form of state bonds,

[203] Knut N. Kjær et al., "The fiscal rule must not stand in the way of a sharp increase in Norway's support to Ukraine," *Aftenposten,* March 2, 2025.
[204] Karlsrud, Stormoen and Svendsen, *Pace and effectiveness of Norway's support to Ukraine*, NUPI, 6 May 2025
[205] Anna Caprile and Tim Peters, «Confiscation of immobilised Russian state assets – State of play, arguments and scenarios», briefing, *European Parliament*, 8 September 2025.
[206] Anna Caprile and Tim Peters, «Confiscation of immobilised Russian state assets – State of play, arguments and scenarios», briefing, *European Parliament*, 8 September 2025.

gradually maturing into cash, and are consequently placed in low-risk central bank accounts. The freezing of the assets came with the EU's Third Package of sanctions which included bans on transactions involving the assets of the Central Bank of Russia.

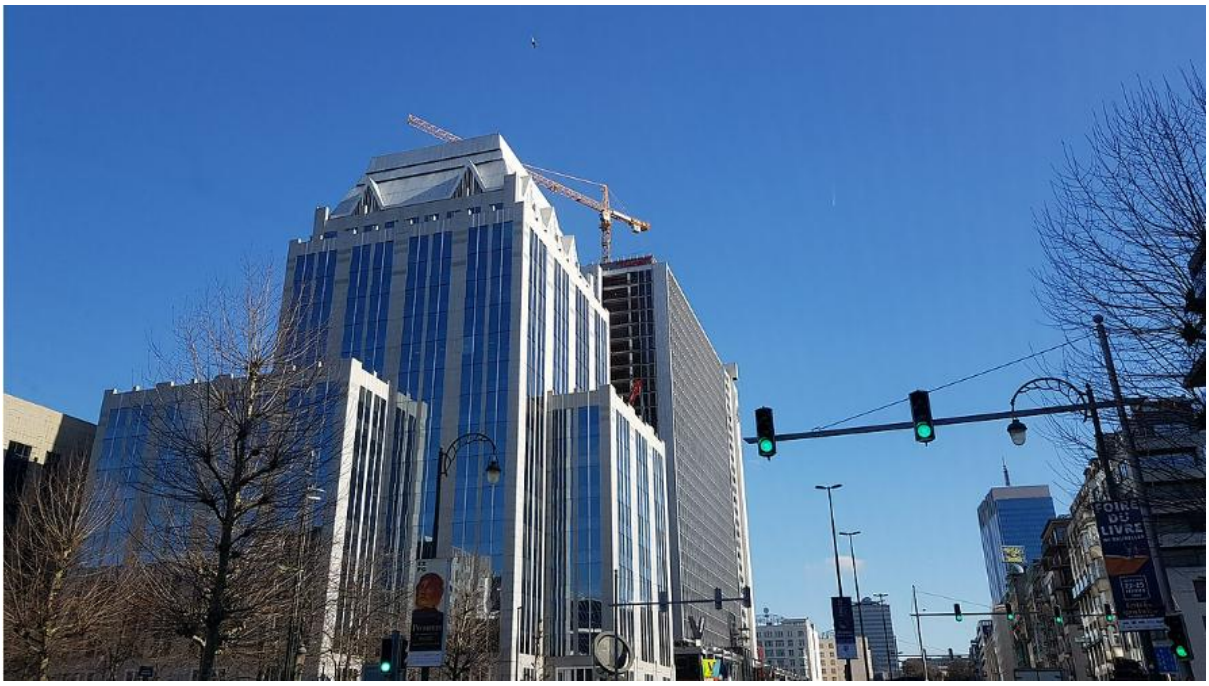
The legal regulations pertaining to non-universal (i.e., non-UN) sanctions and confiscations of assets are unclear. [207] Rules concerning non-intervention, sovereign state immunity, and regulations under WTO treaties or bilateral investment treaties, will generally disfavour confiscations of sovereign assets. Against this, states can take so-called "countermeasures" against other states' unlawful or wrongful acts, against the use of military force, and in protection of basic human rights. Proponents of confiscation point to the legality of taking countermeasures, or invoking rights of collective defence, against Russian gross violations of international law by illegally attacking Ukraine and committing various war crimes and other violations.[208] The Parliamentary Assembly of the Council of Europe unanimously called for the seizure of Russian assets in April 2024.[209] The EU Parliament has adopted a similar stance.[210] Especially, the EU Parliament points out ay feasible pathway to confiscation by the judgement of international courts or tribunals that Russia owes reparations to Ukraina. This may be organised through a specific Restitution and Reconstruction Bank.[211]

If one chooses to seize Russian assets and make them available to Ukraine as advance war reparations, it will cover Ukraine's funding needs for 1-3 years and reduce Europe's costs considerably.[212] By issuing bonds for Ukraine backed by frozen assets through the *ERA* mechanism, the EU has already deprived Russia of owner's rights to the funds' returns. Full confiscation would 20-fold increase the funds at its disposal and is legally grounded in exceptions to the rules on state sovereignty and immunity, in cases of violations of international law and conventions, damages under international court decisions, or collective defence.[213] The reserves were built up to finance an illegal war of aggression with extensive use of torture and war crimes. The economic impact of confiscating the assets was probably priced in by markets already when they were frozen in 2022.[214] The *KSE Institute* in Kyiv, in a study, found no evidence of structural shifts away from G7 currencies, or sovereign debt market effects, from the freezing of Russian assets.[215] They remind that Russia has already confiscated 45 billion euros worth of Western assets, and estimates a manageable interest rate risk from confiscation. Experts remind that confiscation would entail a reduced need to raise capital through other issues to the international sovereign debt market, with positive effects on interest rates.[216] Still, some experts fear retaliation including by allies of Russia withdrawing funds from European financial institutions, hurting the credibility of the Euro.

[207] Dr Patrick Butchard, «Sanctions, international was and seizing Russian assets», House of Commons, London 7 November 2024.
[208] Anders Olofsgård, *The Case for Seizing Russian State Assets*. (Stockholm: FREE Network, 2025).
[209] Council of Europe, Parliamentary Assembly, Resolution 2539 (2024).
[210] EU Parliament, Resolution of 19 September 2024, and Resolution of 12 March 2025.
[211] Olena Halushka, Daria Kaleniuk, Andrii Mikheiev, «Ukraine Restitution and Reconstruction Bank, International Center for Ukrainian Victory, 24 December 2024.
[212] Anna Vlasyuk, *Legal Report on Confiscation of Russian State Assets for The Reconstruction of Ukraine*. (Kyiv: KSE Institute, 2024).
[213] Anders Olofsgård, *The Case for Seizing Russian State Assets*. (Stockholm: FREE Network, 2025).
[214] Olofsgård, *The Case for Seizing Russian State Assets*.
[215] Benjamin Hilgenstock, Lucas Risinger, Anna Vlasyuk and Elina Ribakova, «Implications of the Confiscation of Russian Sovereign Assets», *KSE Institute*, 13 April 2025.
[216] Anna Caprile and Tim Peters, «Confiscation of immobilised Russian state assets – State of play, arguments and scenarios», briefing, *European Parliament*, 8 September 2025, p 5.

The United States, the Nordic countries, and EU Commission President Ursula von der Leyen endorse the use of the principal as collateral for funding.[217] So far, Western governments limit themselves to issue loans secured by the proceeds from the frozen assets. On 10 December 2024 transferred its holdings as an 18 billion euro loan to the World Bank, for distribution to projects in Ukraine, equal to the 18.1 billion euros similarly lent by the European Union through the ERA mechanism.[218]

The debates between Member States and the European Central Bank, of the suitability and lawfulness of confiscating assets, have not been settled. In the meantime, a substantial under-financing of Ukrainian needs during the summer of 2025 sparked a debate over the EU issuing a 140 billion euros European reparations loans to Ukraina, with collateral security in the principal capital of frozen Russian state funds, and with Ukrainian repayment only if and when Russia pays compensations for war damages.[219] Against this proposal, the government of Belgium has objected that the risk of future litigation from Russia be managed through collective guarantees from European governments, including Norway. According to the Nordic heads of government, the step of seizing assets as security is now a political question.[220]



The Euroclear headquarters in Brussels, Belgium, holding most of the frozen Russian state assets. Romaine, CC Public Domain.

The EU's Ukraine Facility only has 18 billion euros left, with few immediate prospects of replenishment. If the EU does not reach conclusion by December, loans would have to be issued with European governments as guarantors, burdening state budgets. Two Norwegian economists have floated the idea that Norway could employ parts of its Pension Fund as collateral for a European loan to Ukraine, alone or as part of wider European guarantees.[221] However, the government has no jurisdiction over the fund (government confiscation of pension fund assets has only taken place in Russia during the war). Minister

[217] Jorge Liboreiro, Nordic leaders rule out joint debt, insist on Russian frozen assets to support Ukraine, *EuroNews*, 28 October 2025.
[218] Anna Caprile and Tim Peters, «Confiscation of immobilised Russian state assets – State of play, arguments and scenarios», briefing, *European Parliament*, 8 September 2025, pp 3-4.
[219] Jennifer Rankin, EU leaders fail to agree to use frozen Russian assets to defend Ukraine, *The Guardian*, 24 October 2025.
[220] Jorge Liboreiro, Nordic leaders rule out joint debt, insist on Russian frozen assets to support Ukraine, *EuroNews*, 28 Oct 2025.
[221] NTB, EU-ekspert om at Norge stiller som garantist for Ukraina-lån: – Strålende idé, *Forskning.no*, 11 November 2025.

of Finance, Jens Stoltenberg, has ruled out a unilateral Norwegian guarantee, without as part a joint and broad European commitment.[222] In reality, only the government of Norway could act as the guarantor, having to allocate provisions for loss through the state budget, like any other government. And in our view, Norway guaranteeing for an unproportional share of liabilities might risk de-mobilising other European countries from stepping up their support to Ukraine. Rather, European governments should strive to confiscate frozen assets, and otherwise replenish the Ukraine Facility, while Norway should substantially step up its direct contributions to Ukraine from 2026 onwards..

7.2.4 Avoiding corruption in Ukrainian military procurement

Like all ex-Soviet and southeast European countries, Ukraine has a long legacy of corruption. War is a breeding-ground of corruption, as society faces high needs of vital equipment from few sources. Researchers often distinguish between lower-level petty corruption including facilitation where officials take a small bribe to render some service, and higher-level briberies and kickbacks to earn contracts or more elevated political favours. While it is commonly believed that digitalisation of almost all public services has substantially reduced low-level petty corruption in Ukraine, larger schemes prevail.

In July 2025, the President's Office proposed a legal reform to bring the country's corruption investigator (NABO) and prosecutor (SAPO) under the president-appointed Prosecutor General, allegedly to curb the influence of Russian infiltrators in the services. This culminated a prolonged struggle over the naming of senior officials in the anti-corruption apparatus. In November, NABU presented the revelation of a € 90 million corruption scandal in the state-owned Energoatom, involving close associates of President Zelensky and inducing him to sack several ministers and executives.[223] Anti-corruption activists saw an emerging culture of higher-level corruption as a symptom of the growing powers emerging around the President and his office, in the absence of elections and strong parliamentary checks and balances. Among their calls for reform are truly independent prosecutor general and investigative institutions, stronger recruitment diligence on candidate judges, reform of state investigator SBI and security service SSU, a set of enhanced EU accession interim reform benchmarks, and conditionalities in allied funding.[224]

In Ukraine, the Defence Procurement Agency (DPA) sources 9 billion euros of annual procurements solely among vendors pre-qualified by the Ministry of Defence. Contracts sometimes bypass the DPA, their details are classified and often defy parliamentary scrutiny, with risks of corruption and oligarchic influences.[225] The so-called Danish Model, where the government of Denmark directly funds Ukrainian vendors, also suffers under opacity in the processes of pre-qualification and identification of needs and comparable pricing.[226] Remedies against corruption in procurement, with its risks of breeding crime and

[222] *The Brussels Times*, «Out of the Question: Norway rules out being the sole guarantor of loan to Ukraine», 12 November 2025.

[223] Samya Kullab and Isobel Koshiw, A corruption scandal pressures Ukraine's Zelensky to show greater accountability, *Associated Press*, 20 November 2025.

[224] ANTAC, ANTS, AutoMaidan, Mezha, and DeJuRe: *Ensuring effective reform conditionality for Ukraine's continuous democratic transition*, policy paper, Kyiv, October 2025.

[225] ANTAC, *Advancing Defence Procurement Reform in Ukraine – The Role of Conditionalities*, bolicy paper, Kyiv, October 2025.

[226] ANTAC, *Advancing Defence Procurement Reform in Ukraine – The Role of Conditionalities*, bolicy paper, Kyiv, October 2025.

sourcing sub-quality equipment, includes especially to decentralise procurement to lower-level units such as brigades, independent forces, the National Guard, and volunteer philanthropic organisations.

Many systems are being developed between local units and small producers, but our study identifies needs for higher-level weaponry at high costs and needs of standardisation, typically sourced by the DPA. Anti-corruption organisations advise donor countries to explore reform conditionality, open contract performance and independent pricing audits, component cost transparency, direct participation in selection process for judges and prosecutors, and direct operational participation of allied managers in a joint international defence procurement agency.[227] The Energoatom scandal appeared despite a substantial advisory board consisting of allied experts from the United States and Europe, including from Germany, Denmark and Norway. Corruption, embezzlement and fraud are hidden in the nitty-gritty, lower-level financial transactions, sales and distribution units, where only the direct placement of operational experts will have any chance of revealing wrongdoing.

7.2.5 Funding Ukraine's military capacities

Having explored the debate over confiscation of Russian assets as pre-payment for war reparations, and the possible reform pathways to curb corruption in Ukraine, there remains several ways to practically fund the needed expansion of Ukrainian military capacities under Scenario 2.

From the start, allied countries delivered substantial in-kind supplies of weapons and other equipment, with efficient delivery and less scope for corruption or embezzlement. For financial contributions, allied countries established procurement funds in Great Britain and the Czech Republic, and pooled bilateral donations from various countries to secure large-scale armament and ammunition procurement at lowest possible cost, and with maximum resources for oversight. Direct funding via Ukraine's state budget is being channelled via multilateral organisations such as the World Bank, IMF, and the EU.

From 2024, the "Danish Model" implies that the MOD of Ukraine pre-qualifies lists of potential vendors, while the government of Denmark takes an active part in vendor selection, contract development, and funding of the vendors without having to transfer money via the Ukrainian government. [228] Norway's government develops partly similar schemes with direct co-funding of innovative arms development.[229] More extendedly, these two and other European countries facilitate military-industrial joint ventures, such as those involving Kongsberg and Nammo. These models enhance the defence development both in Ukraine and the allied countries, and partly intersect with private investments in local innovation, start-ups and scale-ups. Platforms such as Brave1, Defence Innovation Highway, and Iron Cluster facilitate contact between foreign investors and target candidates among small or medium-sized businesses. Allied governments should assist such private groups with investment advice and local due diligence resources.

While traditional procurement processes are often time-consuming and cumbersome, direct funding and decentralised supply schemes are often more cost-efficient and deliver at enhanced speed. The

[227] ANTAC, *Advancing Defence Procurement Reform in Ukraine – The Role of Conditionalities*, bolicy paper, Kyiv, October 2025.
[228] Ministry of Foreign Affairs, «Denmark establishes defence industry hub in Kyiv», Copenhagen, 1 Oct 2024,
[229] Ministry of Defence, «Norsk-ukrainsk samarbeid om nye forsvarsteknologier», 9 October 2025.

decentralised, empowered supply schemes of local and independent military units have greatly reduced the scope for larger-scale embezzlement and corruption. Other models to explore may include in-kind donations, government-to-government sales, lease mechanisms, allied guarantee import purchases from Ukrainian producers, and a more widespread use of co-production abroad in allied countries.. Local procurement avoids long and expensive logistical supply chains, but contribute to fiscal-monetary pressure and involve risks corruption or destruction of production sites. Therefore, co-production in European partner countries has much merit, especially under the accelerated and extraordinary supplies envisaged under Scenario 2.

7.3 Total scenario costs for Europe and Norway

We have estimated the annual European budgetary impacts and military costs of two scenarios for Ukraine's development, without Net Present Value calculations, but including costs to develop European infrastructure, civilian protection, and including net production losses. The latter is uncertain and probably somewhat underestimated in both scenarios. We assume Europe to cover all costs, with proportional contributions from Norway.

For Scenario 1 with a (partial) Russian victory, we assume that the remaining Western Ukraine will be rebuilt, while Russia has limited access to pose a military threat to Europe via Ukraine. We therefore assume that the costs to support Ukraine's defence and reconstruction following a peace agreement are the same in both scenarios. Under Scenario 1, however, the defence of Europe must be prepared much more rapidly, over just 3-4 years. The flow of Ukrainian refugees and internally displaced persons will increase dramatically, with 6-11 million entering Europe and 100-150,000 heading to Norway. We believe they will arrive gradually over the years, partly because Western Ukraine's ability to take care of internally displaced people will decrease, and with increased social challenges in receiving countries, this will offset any increased rate of employment of Ukrainian refugees in Europe.

We estimate increased European military costs in 2026 by 71 billion euros in the Baltics, 17 billion euros in the Nordics, and military and social support to Ukraine with 100 billion euros. Total military and related costs number 188 billion euros in 2026 - and a total of 338 - 463 billion euros when we include a doubling of refugees. Total costs are estimated to decline to 319-432 billion euros in 2027.

For Scenario 2 with a (partial) Ukrainian victory, we estimate military and related costs for Europe at 258 - 419 billion euros in 2026, declining already in 2027 to 138 - 243 billion euros due to the cessation of fighting and reduced refugee costs. We have not estimated savings from reduced Ukrainian repairs of war damages or increased local tax revenues. There will be cost savings from the repatriation of up to 1.5 million refugees, increased foreign investment, and from increased growth in Ukraine induced by trade with neighbours. Ukraine's capabilities of self-funding will increase, partly from corporate tax revenues and partly from lower costs of damage repairs. Reduced country risk premium will increase return on capital and may enable the Norwegian Oil Fund to invest in Ukraine. We have, very conservatively, calculated just a 15 billion euro one-off saving from all these factors.

We estimate the following total annual costs to **Europe** under the scenarios, excluding current European defence budgets, but including all support to Ukraine with the exception of the later reconstruction:

Annual cost, constant prices	EUROPE Euros	NORWAY Euros	NORWAY Kroner
Scenario 1. Russian (partial) victory			
Ukraine support, excl reconstruction	*100 bn*	*7.5 bn*	*90 bn*
Increased flow of refugees to Europe	*150-275 bn*	*4.5-6.5 bn*	*55-75 bn*
Defence of the Baltics, Nordics	*88 bn*	*8.0 bn*	*90 bn*
Enhanced army forces in Norway		*4.5 bn*	*50 bn*
Total cost 2026	338-463 bn	25-27 bn	290-315 bn
Total cost 2027	319-432 bn	24-26 bn	280-300 bn
Total cost 2028	287-387 bn	23-25 bn	265-290 bn
Total cost 2029	261-351 bn	22-24 bn	255-280 bn
Total over four years, 2026-2029	1,205-1,633 bn	94-102 bn	1,090-1,185 bn
Scenario 2. Ukrainian (partial) victory			
Total cost 2026	258-419 bn	19-31 bn	220-360 bn
Year 2: Mil support up to minimum level	*173-295 bn*	*19.0 bn*	*220 bn*
Year 2: Repatriated refugees, savings	*- 20 bn*	*- 1.5 bn*	*17 bn*
Year 2: Reduced country risk, gains	*- 15 bn*	*- 0.7 bn*	*4 bn*
Total cost 2027	138-243 bn	8-17 bn	95-195 bn
Year 3: Mil support up to 2025 level	*63-88 bn*	*8.0 bn*	*70-95 bn*
Total costs 2028 and 2029	63-88 bn	6–8 bn	70-95 bn
Total over four years, 2026-2029	522-838 bn	39-64 bn	455-745 bn

For **Norway,** we sum up the cost elements of the two scenarios, and we thereafter compare Norwegian annual defence expenditures and support to Ukraine with some other Norwegian costs and revenues in the same period, measured in Norwegian kroner (NOK):

	Norwegian Kroner (NOK), constant prices
The Oil Fund's returns, 2024 [230]	2,511 bn
The Oil Fund's returns, 2023 [231]	2,222 bn
Budget pandemic cost 2020-21, annually[232]	116 bn
Production loss Covid-19, 2020[233]	145 bn
Norwegian defence budget, 2025	103 bn
Norwegian support for Ukraine, 2025	96 bn
Russian victory, total costs 2026-28	1090-1185 bn
... support to rest of Ukraine 2026-28	*275 bn*
... increased refugee flow 2026-28	*160-220 bn*
... share of European rearmament 2026-28	*260 bn*
... accelerated Norwegian rearmament 2026-28	*150 bn*
Russian victory, total costs 2026	290-315 bn
Russian victory, total costs 2027	280-300 bn
Russian victory, total costs 2028	265-290 bn
Russian victory, total costs 2029	255 – 280 bn
Ukrainian victory, total costs 2022-28	455-745 bn
Ukrainian victory, total costs 2026	220 -360 bn
Ukrainian victory, total costs 2027	95-195 bn
Ukrainian victory, total costs 2028	70-95 bn
Ukrainian victory, total costs 2029	70-95 bn

Investing in Scenario 2 will bring economic gains to Ukraine and Europe in general – in addition to a not insignificant security gain by posturing that Europe can repel destructive, authoritarian aggressors. It will also reduce the chance of political and social unrest following millions of new refugees, increased political polarisation in Europe, and raising public costs.

The alternative, Scenario 1, could mean the end of Europe as we know it. Democratic institutions, open discussion and a redistributive welfare state may come under severe pressure from populist forces and criminal groups strengthening their position. The fight for Ukrainian victory is therefore not only about Ukraine, but about the future of Europe. A Ukrainian victory will require political and economic statecraft. It requires courageous and visionary politicians who are willing to accept a certain risk in the short term, to avoid a significant risk in the longer term. They must allocate larger sums in the coming years, combined with stronger economic sanctions against Russia, hoping that together this will suffice to give Ukraine the upper hand and force Russia to a sustainable peace. Europe's leaders should act and prove

[230] Mikael Holter, "The oil fund with a return of NOK 2,511 billion in 2024 – a new record in kroner", *Dagens Næringsliv,* 29 Jan 2025.
[231] Holter, "The oil fund with a return of NOK 2,511 billion in 2024 – a new record in kroner".
[232] Erik Magnus Sæther, Hanna Isabel Løyland and Christoffer Bugge, "A cost-benefit analysis indicates less stringent infection control measures against COVID-19", *Journal of the Norwegian Medical Association* (11 January 2022).
[233] Fredriksen, "How the corona pandemic has affected the Norwegian economy."

to Russia that they consider the threat to be serious, and do not intend to give in. Rewards are high if one succeeds: A far greater chance of preserving a free and democratic Europe, and necessary deterrence against an authoritarian aggressor. It will demonstrate to the world that democratic countries *can and will* fight for their core values, and that free and democratic societies are stronger than authoritarian ones. If this succeeds, it will constitute a historic turning point, and political leaders who made it possible will go down in history. They will open the door to a new chapter in Europe's history, nothing less.

Norway may play a historic role in contributing to preserve a free Ukraine – if it is willing to spend a small part, NOK 150 billion per year, of our unique oil wealth in contributions to protect democracy against the threats of authoritarianism.



EU conference in support of Ukraine, Paris, February 2024. Photo: Government of Slovenia. Public Domain.

8 Sources

Agenstvo. «The Russian authorities have cut spending on every third state program.» *Telegram,* September 30, 2025. https://t.me/agentstvonews/12165

Aizhu, Chen, and Shu Zhang. «Exclusive: As U.S. sanctions loom, China's Bank of Kunlun to stop receiving Iran payments.» *Reuters,* 23 October 2018. https://www.business-standard.com/article/reuters/exclusive-as-u-s-sanctions-loom-china-s-bank-of-kunlun-to-stop-receiving-iran-payments-sources-118102300739_1.html

Amsrud, Sander Sebastian. "This is what Ukrainian refugees get from NAV: Can say no to work." *Nettavisen,* 13 November 2024. https://www.nettavisen.no/okonomi/ukrainere-mottar-1-6-milliarder-i-sosialhjelp-vil-ikke-pa-nav/s/5-95-2123390

Axe, David. "4.5 million drones is a lot of drones. It's Ukraine's New Production Target For 2025.» *Forbes,* March 12, 2025. https://www.forbes.com/sites/davidaxe/2025/03/12/45-million-drones-is-a-lot-of-drones-its-ukraines-new-production-target-for-2025/

Baker, Stephanie. *Punishing Putin*. London: HarperCollins, 2024.

Becker, Torbjörn, Anders Olofsgård, Maria Perrotta Berlin and Jesper Roine. *Swedish support for Ukraine in an international context: Public finance effects and future scenarios*. Stockholm School of Economics, SITE, Report to the Swedish Fiscal Policy Council, 2025. https://www.fpr.se/download/18.7e539f2194d337c9da2d4a7/1739358945079/Svenskt%20Ukrainast%C3%B6d%20i%20en%20internationell%20kontext.pdf

Belkin, Vadim. «Bargaining, Acceptance, Recession: Why It's Getting Harder to Deny Russia's Economic Downturn.» *The Insider,* August 6, 2025. https://theins.ru/en/economics/283807

Bergmann, Max, et al. *Out of stock? Assessing the impact of sanctions on Russia's defense industry*. Washington DC: CSIS, 2023. https://www.csis.org/analysis/out-stock-assessing-impact-sanctions-russias-defense-industry

Bielieskov, Mykola. «Putin's escalating air offensive is overwhelming Ukraine's defenses.» *Atlantic Council,* July 1, 2025. https://www.atlanticcouncil.org/blogs/ukrainealert/putins-escalating-air-offensive-is-overwhelming-ukraines-defenses/

Binder, Johannes, and Moritz Schularick. *Kiel Policy Brief No. 179: The Costs of Not Supporting Ukraine*. Kiel: Kiel Institute for the World Economy, 2024. https://www.ifw-kiel.de/fileadmin/Dateiverwaltung/IfW-Publications/fis-import/2a62f762-49a1-410a-8225-ca50193faa38-KPB_179_EN.pdf

Bjørtvedt, Erlend. *Russia's foreign trade and trade costs 2019–2024*. Oslo: Corisk, 2024. https://www.researchgate.net/publication/384867435_Russia%27s_foreign_trade_and_trade_costs_2019-2024

Bjørtvedt, Erlend. *Corisk: Sanctions of Russia – Warsaw G7 Jan 2024 Conference Presentation*. Oslo: ResearchGate, 2024. https://www.researchgate.net/publication/378768787_Corisk_Sanctions_of_Russia__Warszawa_G7_JAN_2024_Conference_Presentation

Bjørtvedt, Erlend; Aage Borchgrevink and Tine Vigmostad, et al. *The Russia Sanctions as a Human Rights Instrument*. Oslo: Norwegian Helsinki Committee, October 2023. The Russia sanctions as a human rights instrument: Violations of export controls regarding war-critical goods to Russia

Bjørtvedt, Erlend; Karsten Friis and Ole Martin Stormoen. "Europe must take responsibility in Ukraine", *Dagens Næringsliv*, 8 July 2025. Europe must take responsibility in Ukraine | DN

Bjørtvedt, Erlend; Karsten Friis, Trygve Johannes Smidt, John Karlsrud, Ole Martin Stormoen, Olav Slettebø, Casper Waagbø. To scenarier for Ukraina-krigen. Norwegian Institute of International Affairs (Nupi). Oslo, 11 November 2025. https://www.nupi.no/publikasjoner/cristin-pub/to-scenarier-for-krigen-i-ukraina-hva-betyr-de-for-europa-og-hva-vil-det-koste

Bortnyk, Ruslan, and Oksana Krasovska. *Economics of the Russian–Ukrainian War (2022–2024): Analytical Review*. Kyiv: Ukrainian Institute for Applied Macroeconomics (UIAMP), 2025. https://uiamp.org/en/economics-russian-ukrainian-war-2022-2024-analytical-review

Brar, Aadil. «Russia Suffers Punishing Fees to Trade with China: Report.» *Newsweek,* May 24, 2024. https://www.newsweek.com/china-russia-trade-shadow-banks-1904322

Bronk, Justin. NATO should not replace traditional firepower with 'drones'. London: RUSI, 2025. https://www.rusi.org/explore-our-research/publications/rusi-defence-systems/nato-should-not-replace-traditional-firepower-drones

Bry, Gerhard. «Wages during War, Inflation, and Dictatorship.» In *Wages in Germany, 1871–1945*, edited by Gerhard Bry and Charlotte Boschan, 191–265. Princeton: Princeton University Press for the National Bureau of Economic Research, 1960. https://www.nber.org/system/files/chapters/c2509/c2509.pdf

Butchard, Patrick. «Sanctions, international was and seizing Russian assets». House of Commons, London, 7 November 2024.

Caprile, Anna and Tim Peters. «Confiscation of immobilised Russian state assets – State of play, arguments and scenarios». Briefing, *European Parliament*, 8 September 2025.

Charap, Samuel and Sergey Radchenko. «The Talks That Could Have Ended the War in Ukraine». *Foreign Affairs*, 16 April 2024. T https://www.foreignaffairs.com/ukraine/talks-could-have-ended-war-ukraine

Chas Pravdy. "Social support for Ukrainian refugees in Germany: Scale, financial payments and future prospects." *Chas Pravdy,* August 4, 2025. https://chaspravdy.com/en/news/economy-en/2025/08/04/social-support-for-ukrainian-refugees-in-germany-scale-financial-payments-and-future-prospects/

Clark, Mason. *The Russian Military: Forecasting the Threat*. Washington DC: Institute for the Study of War (ISW), 2025. https://www.understandingwar.org/wp-content/uploads/2025/10/The-Russian-Military-Forecasting-the-Threat.pdf

Clark, Mason, George Barros, Kateryna Stepanenko, and Karolina Hird. *Russian Offensive Campaign Assessment, April 18, 2022*. Washington DC: Institute for the Study of War, 2022. https://understandingwar.org/research/russia-ukraine/russian-offensive-campaign-assessment_18-30/

Clark, Mason, George Barros, and Kateryna Stepanenko. *Russian Offensive Campaign Assessment, April 6, 2022*. Washington DC: Institute for the Study of War, 2022. https://understandingwar.org/research/russia-ukraine/russian-offensive-campaign-assessment_6-32/

Conflict Intelligence Team. «How Many T-90M Tanks Does Russia Produce?» *Teletype,* 19 June 2025. https://notes.citeam.org/eng_t90

Coolican, Sarah. *The Russian Diaspora in the Baltic States: The Trojan Horse that Never Was*. London: LSE IDEAS, 2021. https://www.lse.ac.uk/ideas/Assets/Documents/updates/LSE-IDEAS-Russian-Diaspora-Baltic-States.pdf

Cranny-Evans, Sam. "Blood and Dust: The Rise of Russia's Glide Bombs." *European Security & Defence,* 15 July 2025. https://euro-sd.com/2025/07/articles/armament/45382/blood-and-dust-the-rise-of-russias-glide-bombs/

Cuesta, Javier G., and Ignacio Fariza. «Russia on the Edge of Economic Collapse after 40 Months of War.» *El País*, July 7, 2025. https://english.elpais.com/economy-and-business/2025-07-07/russia-on-the-edge-of-economic-collapse-after-40-months-of-war.html

Danish Refugee Council (DRC). "Protection of Civilians Week: spotlight on Ukraine." *Danish Refugee Council*, 22 May 2025. https://drc.ngo/resources/news/protection-of-civilians-week-spotlight-on-ukraine/

de Hoon, Marieke. «Dutch Court: Russia had overall control of forces in eastern Ukraine downing of flight MH17.» *Just Security,* December 19, 2022. https://www.justsecurity.org/84456/dutch-court-in-life-sentences-russia-had-overall-control-of-forces-in-eastern-ukraine-downing-of-flight-mh17/

Dupuy, Trevor N. *Attrition: Forecasting Battle Casualties and Equipment Losses in Modern War*. NOVA Publications, 1995.

Dupuy, Trevor N. *Understanding War: History and Theory of Combat*. Paragon House, 1987.

Dupuy, Trevor N. *Numbers, predictions, and war: Using history to evaluate combat factors and predict the outcome of battles*. Bobbs-Merrill, 1979.

DW. «Germany: Spy chiefs warn of increasing Russian threat.» *Deutsche Welle,* 14 October 2024. https://www.dw.com/en/germany-spy-chiefs-warn-of-increasing-russian-threat/a-70493640

Estonian Foreign Intelligence Service. *Russia's Armed Forces Are Expanding*. Estonia: Estonian Foreign Intelligence Service, 2024. https://raport.valisluureamet.ee/2025/upload/vla_eng-raport_2025_WEB_1-1.pdf

EuroMaidan Press, «Frontline Report: Tank production in crisis as Russia's war economy hits the wall», 18 November 2025.

Fedorov, Yury. *Russian Military Manpower After Two and a Half Years of War in Ukraine*. Paris: IFRI, 2024. https://www.ifri.org/sites/default/files/2024-11/ifri_fedorov_russian_military_manpower_rer48_nov2024.pdf

Fedyk, Anastassia, and James Hodson. *New analysis from Economists for Ukraine: The cost of US aid to Ukraine is less than half the official figures*. London: CEPR, 2025. https://www.cepr.org/voxeu/columns/new-analysis-economists-ukraine-cost-us-aid-ukraine-less-half-official-figures

The Danish Defence Intelligence Service. *Updated assessment of the threat from Russia to the Danish Realm*. Copenhagen: Danish Defence Intelligence Service, 2025. https://www.ft.dk/samling/20241/almdel/FOU/bilag/79/2977109/index.htm

Fravel, M. Taylor, George Gilboy, and Eric Heginbotham. «China's Defense Spending: The $700 Billion Distraction.» *MIT Security Studies Program (MIT SSP*), September 2, 2024. https://ssp.mit.edu/news/2024/fravel-gilboy-heginbotham-on-china-s-defense-spending-the-700-billion-distraction

Fredriksen, Kristin. "This is how the corona pandemic has affected the Norwegian economy." *Statistics Norway,* 14 April 2021. https://www.ssb.no/nasjonalregnskap-og-konjunkturer/artikler-og-publikasjoner/slik-har-koronapandemien-pavirket-norsk-okonomi

Friis, Karsten. "Can Trump end the war". *Klassekampen*, 14 November 2024. https://www.nupi.no/publikasjoner/cristin-pub/kan-trump-avslutte-krigen

Friis, Karsten; Ed Arnold, and Max Bergmann. «US and UK Elections: Implications for NATO and Northern European Security». *Norwegian Institute of International Affairs*. *Nupi Report No 8*, 2024. US and UK Elections: Implications for NATO and Northern European Security

Garcia, Naomi. "Open Secrets: Exposing PRC-Russia Wartime Trade." *C4ADS,* April 6, 2023. https://c4ads.org/commentary/open-secrets-prc-russia-wartime-trade/

George, Matthew, et al. *Trends in International Arms Transfers, 2024*. Stockholm: SIPRI, 2025. https://www.sipri.org/sites/default/files/2025-03/fs_2503_at_2024_0.pdf

The Global Data Institute and the International Organization for Migration (IOM). *Ukraine Displacement Report*. Geneva: IOM, 2025. https://dtm.iom.int/sites/g/files/tmzbdl1461/files/reports/IOM_UKR_Internal%20Displacement%20Report_GPS%20R20_April%202025.pdf?iframe=true

Google Docs, "Russia-Ukraine Equipment Losses," accessed May 20, 2025, https://docs.google.com/spreadsheets/d/1bngHbR0YPS7XH1oSA1VxoL4R34z60SJcR3NxguZM9GI/edit?gid=0&usp=embed_facebook

Gosselin-Malo, Elisabeth. «Rheinmetall opens repair facility for combat vehicles in Ukraine.» *Defense News,* June 11, 2024. https://www.defensenews.com/global/europe/2024/06/11/rheinmetall-opens-repair-facility-for-combat-vehicles-in-ukraine/

Halushka, Olena, Daria Kaleniuk and Andrii Mikheiev. «Ukraine Restitution and Reconstruction Bank. International Center for Ukrainian Victory, 24 December 2024.

Harrison, Kerry. «Russia's Soyuz Maker Company Is Crashing Under Debt and Delays.» *Orbital Today,* August 29, 2025. https://orbitaltoday.com/2025/08/29/russias-legendary-space-firm-faces-collapse-after-mounting-failures/

Holter, Mikael. "The oil fund with a return of NOK 2,511 billion in 2024 – a new record in kroner." *Dagens Næringsliv,* 29 January 2025. https://www.dn.no/marked/oljefondet/resultater/nicolai-tangen/oljefondet-med-avkastning-pa-2511-milliarder-i-2024-ny-rekord-i-kroner/2-1-1770303

Holynska, Khrystyna. «Something is rotten in the state of Russian arms industry.» *RAND,* August 7, 2024. https://www.rand.org/pubs/commentary/2024/08/something-is-rotten-in-the-state-of-russian-arms-industry.html

Horn, Sebastian, Carmen M. Reinhart, and Christoph Trebesch. «China's overseas lending and the war in Ukraine.» In *Global Economic Consequences of the War in Ukraine: Sanctions, Supply Chains and Sustainability*, edited by Luis Garicano, Dominic Rohner and Beatrice Weder di Mauro. London: CEPR Press, 2022. https://www.hks.harvard.edu/publications/chinas-overseas-lending-and-war-ukraine

Hrudka, Orysia. «Rheinmetall to commence armored vehicle production in Ukraine in 2024.» *Euromaidan Press,* 2 December 2023. https://euromaidanpress.com/2023/12/02/rheinmetall-to-commence-armored-vehicle-production-in-ukraine-in-2024/

IISS. *The Military Balance 2025*. London: Routledge for the International Institute for Strategic Studies, 2025

International Federation of Red Cross and Red Crescent Societies (IFRC). 2025. "IFRC Disaster Response and Preparedness." *IFRC GO* (situation data analysed March 2025). https://go.ifrc.org/

International Federation of Red Cross and Red Crescent Societies (IFRC). *Global Plan 2025*. Geneva: IFRC, 2024. https://www.ifrc.org/sites/default/files/2024-12/IFRC_GlobalPlan_2025.pdf

International Federation of the Red Cross and the Red Crescent (IFRC). "IFRC GO – Region." *IFRC*. Retrieved July 18, 2025. https://go.ifrc.org/regions/3/risk-watch/seasonal

International Institute for Strategic Studies (IISS). *Military Expenditure: Transparency, Defence Inflation and Purchasing Power Parity*. London: IISS, 2022. https://www.iiss.org/globalassets/media-library---content--migration/files/research-papers/2022/12/military-expenditure-transparency-defence-inflation-and-purchasing-power-parity.pdf

Jompy [@Jonpy99]. Profile on X. *Twitter (X).* https://x.com/jonpy99

Jones, Sam. «Historian Tim Snyder: «Our misreading of Russia is deep. Very deep"." *Financial Times,* 28 July 2023. https://www.ft.com/content/9a23b1a7-da4e-466b-99f4-9f7f369fe128

Kagan, Frederick W., George Barros, and Karolina Hird. *Russian Offensive Campaign Assessment, April 5, 2025*. Washington, DC: Institute for the Study of War, April 5, 2025. https://understandingwar.org/research/russia-ukraine/russian-offensive-campaign-assessment-april-5-2025/

Karlsrud, John, Ole Martin Stormoen and Øyvind Svendsen, *Tempo and effectiveness in Norway's support to Ukraine*, Norwegian Institute of International Affairs, 6 May 2025. Pace and effectiveness of Norway's support to Ukraine | NUPI

Kaushal, Sidharth, and Juliana Suess. *The Impact of a Taiwan Strait Crisis on European Defence*. London: RUSI, 2024. https://www.rusi.org/explore-our-research/publications/whitehall-reports/impact-taiwan-strait-crisis-european-defence

Kennedy, Craig. "Russia's Hidden War Debt." *Navigating Russia (Substack),* February 14, 2025. https://navigatingrussia.substack.com/p/russias-hidden-war-debt-full-report

Kiel Institute. 2025. "Ukraine Support Tracker." Retrieved October 2025. https://www.kielinstitut.de/topics/war-against-ukraine/ukraine-support-tracker

Kjær, Knut N., et al. "The fiscal rule must not stand in the way of a sharp increase in Norway's support to Ukraine." *Aftenposten,* March 2, 2025. https://www.aftenposten.no/meninger/debatt/i/jQ1r70/handlingsregelen-maa-ikke-staa-i-veien-for-en-kraftig-oekning-av-norges-stoette-til-ukraina

Kyiv School of Economics (KSE Institute). *Russia's Military Industry Relies on 692 Geographic Clusters – KSE Institute Report*. Kyiv: Kyiv School of Economics, 2025. https://raport.valisluureamet.ee/2025/en/1-russian-armed-forces-and-the-war-in-ukraine/1-1-russias-armed-forces-are-expanding-the-example-of-the-44th-army-corps/

Law Insider. "Kyivstar sample clauses." *Law Insider,* n.d. https://www.lawinsider.com/clause/kyivstar

Lawrence, Christopher A. *War by Numbers: Understanding Conventional Combat*. Lincoln: Potomac Books, an imprint of the University of Nebraska Press, 2017.

Lentini, Azzurra, et al. *Analysis of risks Europe is facing*. Brussels: European Commission Joint Research Centre, 2025. https://publications.jrc.ec.europa.eu/repository/handle/JRC141673

LexTechSuite. *In the case of Visiting and Perepjolkins vs Latvia*. Mumbai: LexTechSuite, 2014. https://lextechsuite.com/In-The-Case-Of-Visting-and-Perepjolkins-Versus-Latvia-2014-05-25

LRT. «Lithuania needs 3 million drones to defend against Russia, says EU commissioner.» *LRT,* July 24, 2025. https://www.lrt.lt/en/news-in-english/19/2598591/lithuania-needs-3-million-drones-to-defend-against-russia-says-eu-commissioner

Lydersen, Trond. "NAV boss on support for Ukrainians – must well over NOK 500,000 in annual salary." *NRK,* 12 January 2024. https://www.nrk.no/norge/nav-sjef-om-stotte-til-ukrainere_-_-ma-godt-over-500.000-i-arslonn-1.16708943

Masala, Carlo. *If Russia Wins*. Atlantic Books, UK, August 2025

Malyasov, Dylan. «Rheinmetall begins Lynx fighting vehicle production in Ukraine.» *Defence-Blog,* 26 October 2024. https://defence-blog.com/rheinmetall-begins-lynx-fighting-vehicle-production-in-ukraine/

Mercator Institute for China Studies (MERICS). «China-Russia Dashboard: Facts and figures on a special relationship.» *MERICS,* 2025. https://merics.org/en/china-russia-dashboard-facts-and-figures-special-relationship?utm_source=substack&utm_medium=email

Merkx, Gilbert W. *Russia's War in Ukraine: Two Decisive Factors*. Quantico: Marine Corps University Press, 2023. https://doi.org/10.21140/mcuj.20231402001

Ministry of Defence of Ukraine. «News on Enemy Losses and Combat Operations in Ukraine.» October 3, 2025. https://mod.gov.ua/en/news/tag-combat

Ministry of National Defence. «New training facilities at the Nowa Dęba – Lipa training grounds.» *Government of Poland,* 22 August 2025. https://www.gov.pl/web/national-defence/new-training-facilities-at-the-nowa-deba--lipa-training-grounds

Ministry of Education and Research and Ministry of Defence. Prop. 87 S (2023–2024) *The Defence Pledge – Long-term Plan for the Defence Sector 2025–2036*. Proposition to the Storting. Oslo: Ministry of Education and Research and Ministry of Defence, 5 April 2024. https://www.regjeringen.no/contentassets/27e00e5acc014c5ba741aacfff235d99/no/pdfs/prp202320240087000dddpdfs.pdf

Ministry of Defence [@DefenceHQ]. «Latest Defence Intelligence update on the situation in Ukraine – 5 August t 2025.» *Twitter (X),* August 5, 2025. https://x.com/DefenceHQ/status/1952652176704111038

Mironenko, Peter. «No: Russia is not on the Verge of a banking crisis.» *The Bell*, 17 January 2025. https://en.thebell.io/no-russia-is-not-on-the-verge-of-a-banking-crisis/

NRK. "Sources to NRK: Saving billions on refugees." *NRK,* 15 May 2025. https://www.nrk.no/nyheter/kilder-til-nrk_-sparer-milliarder-pa-flyktninger-1.17418614

Office of the United Nations High Commissioner for Human Rights (OHCHR). *Protection of civilians in armed conflict — April 2025*. Geneva: OHCHR, 2025. https://ukraine.ohchr.org/en/Protection-of-Civilians-in-Armed-Conflict-April-2025

Olofsgård, Anders. *The Case for Seizing Russian State Assets*. Stockholm: FREE Network, 2025. https://freepolicybriefs.org/2025/06/18/seizing-russian-state-assets/

Oryx. «Attack On Europe: Documenting Ukrainian Equipment Losses During The Russian Invasion Of Ukraine.» u.å. Accessed 20 March 2024. https://www.oryxspioenkop.com/2022/02/attack-on-europe-documenting-ukrainian.html

Polish Real Estate Scientific Society. *Some Aspects of Compulsory Purchase of Land for Public Purposes*. Olsztyn: Polish Real Estate Scientific Society, 2010. https://tnn.org.pl/tnn/publik/18/TNN_monografia_2010.pdf

Prokopenko, Alexandra. «New budget confirms the Russian public is paying for the war.» *Carnegie Politika,* 1 October 2025. https://carnegieendowment.org/russia-eurasia/politika/2025/09/russian-economy-forecast?lang=en

Prokopenko, Alexandra. «Russia's Economic Gamble: The Hidden Costs of War-Driven Growth.» *Carnegie Politika,* December 20, 2024. https://carnegieendowment.org/russia-eurasia/politika/2024/12/russia-economy-difficulties?lang=en

Richard Vereker [@verekerrichard1]. «1) Russian tank loss update.» *Twitter (X),* September 26, 2025. https://x.com/verekerrichard1/status/1971575829785424302

Robbins, Siobhan. «EU warns Europe must start building millions of drones to defend itself against possible Russian attacks.» *Sky News,* 26 June 2025. https://news.sky.com/story/eu-warns-europe-must-start-building-millions-of-drones-to-defend-itself-against-possible-russian-attacks-13388472

Robertson, Peter. «Real Military Spending 2024 – Military PPP.» *Military PPP,* May 12, 2025. https://militaryppp.com/2025/05/12/real-military-spending-2024-military-ppp/

Rudnik, Filip. "China-Russia trade: asymmetrical, yet indispensable." *MERICS,* May 7, 2025. https://merics.org/en/comment/china-russia-trade-asymmetrical-yet-indispensable

Ryan, Mick. "China wants Ukraine to Bleed." *Substack,* July 5, 2025. https://mickryan.substack.com/p/china-wants-ukraine-to-bleed

Rybakova, Tatyana. «How the Kremlin Decided to Sacrifice Small Business to Pay for War.» *The Moscow Times,* October 9, 2025. https://www.themoscowtimes.com/2025/10/09/how-the-kremlin-decided-to-sacrifice-small-business-to-pay-for-war-a90768

Rybakova, Tatyana. «Russia's Central Bank Has Lost What Remained of Its Independence.» *The Moscow Times,* 29 October 2025. https://www.themoscowtimes.com/2025/10/29/russias-central-bank-has-lost-what-remained-of-its-independence-a90972

Saida, Niginakhon. "Russia Still a Cold Front for Central Asian Migrants." *The Diplomat,* November 5, 2024. https://thediplomat.com/2024/11/russia-still-a-cold-front-for-central-asian-migrants/

Sandbu, Martin. «Sanctions on Russia are working.» *Financial Times,* 12 June 2025. https://www.ft.com/content/7a5ded70-166a-4e99-9726-737f01c308a5

Savchenko, Volodymyr. «High interest rate, low growth: Kremlin tries to hide crisis.» *The Ukrainian Review*, 27 May 2025. https://theukrainianreview.info/high-interest-rate-low-growth-kremlin-tries-to-hide-crisis

Sgaravatti, Giovanni; Simone Tagliapietra, Cesilia Trasi, Gerog Zachmann. *National fiscal policy responses to the energy crisis*. Bruegel dataset, June 26, 2023. National fiscal policy responses to the energy crisis

SME Norway. "Report on the employment of Ukrainian refugees: "Norway is doing too bad a job." *NTB*, 15 March 2024. https://kommunikasjon.ntb.no/pressemelding/18058404/rapport-om-sysselsettingen-av-ukrainske-flyktninger-norge-gjor-en-for-darlig-jobb?lang=no&publisherId=11898808

Spirlet, Thibault. "Ukraine Army Forming New Brigades but Can't Supply All of Them." *Business Insider*, July 4, 2024. https://www.businessinsider.com/ukraine-army-forming-new-brigades-cant-supply-all-russia-experts-2024-7

Statista. «Number of Ukrainian refugees recorded in Europe since February 2022, by selected country.» Updated May 2025. https://www.statista.com/statistics/1312584/ukrainian-refugees-by-country/

Stockholm Institute of Transition Economics (SITE). *Financing the Russian War Economy*. Stockholm: SITE, 2025. https://www.consilium.europa.eu/media/d4zd40wd/financing-the-russian-war-economy-stockholm-institute-of-transition-economics.pdf

Stockholm Institute of Transition Economics (SITE). *The Russian Economy in the Fog of War*. Stockholm: Stockholm School of Economics, 2024. https://www.konj.se/media/piamenjt/2024-10-01-report-on-the-russian-economy.pdf

Stockholm Institute of Transition Economics. "Sanctioning Russia: Tools & Challenges in a Changing Geopolitical Order." *YouTube,* June 23, 2025. Lecture, 2:09:10. https://www.youtube.com/watch?v=Uz25SOXD0KQ&t=4238s

Tan, Huileng. "Russia is having a harder time doing business globally with new sanctions, as some Chinese banks are returning payments for goods already shipped." *Business Insider*, August 30, 2024. https://www.businessinsider.com/russia-economy-china-banks-return-payments-shipped-goods-exports-sanctions-2024-8

The German Marshall Fund of the United States. "China Global Podcast – Episode #78 – Ft. Yanmei Xie." *YouTube*, June 11, 2024. Interview, 29:11. https://www.youtube.com/watch?v=Uz25SOXD0KQ

The Moscow Times. "Bank of China Halts Payments with Sanctioned Russian Lenders." *The Moscow Times*, 24 June 2024. https://www.themoscowtimes.com/2024/06/24/bank-of-china-halts-payments-with-sanctioned-russian-lenders-kommersant-a85503

The Moscow Times. "The real inflation rate for Russians has exceeded 70% since the start of the war." *The Moscow Times*, 20 August 2024. https://www.moscowtimes.ru/2024/08/20/realnaya-inflyatsiya-dlya-rossiyan-s-nachala-voini-previsila-70-a139908

The Moscow Times. "One in four shopping malls in Russia is on the verge of bankruptcy." *The Moscow Times*, 18 December 2024. https://www.moscowtimes.ru/2024/12/18/kazhdii-chetvertii-torgovii-tsentr-v-rossii-okazalsya-na-grani-bankrotstva-a150826

The Moscow Times. «More Taxes for More War: Unpacking Russia's 2026 Budget.» *The Moscow Times*, 7 October 2025. https://www.themoscowtimes.com/2025/10/07/more-taxes-for-more-war-unpacking-russias-2026-budget-a90736

Topcor. «Barter 2.0: can Russian foreign trade move away from using the dollar.» *Topcor*, June 28, 2024. https://en.topcor.ru/48969-barter-20-mozhet-li-rossijskaja-vneshnjaja-torgovlja-ujti-ot-ispolzovanija-dollara.html

Tril, Maria. «Russian Banks Fear Debt Crisis Is Coming as War Strains Economy.» *Bloomberg*, June 26, 2025. https://www.bloomberg.com/news/articles/2025-06-26/russian-banks-fear-debt-crisis-is-coming-as-war-strains-economy

United Nations Regional Information Centre for Western Europe (UNRIC). "2024: UN Humanitarian Forecasts for Ukraine." *UNRIC*. September 11, 2024, https://unric.org/en/2024-un-humanitarian-forecasts-for-ukraine/

Vislogusov, Vadim. "Budget sent to Okhotny Ryjad." *Kommersant*, 30 September 2025. https://www.kommersant.ru/doc/8078571

Vjerstka. «Distribution of budget funds to regions, Plan for 2026.» *Telegram*, October 1, 2025. https://t.me/svobodnieslova/7626

Vlasyuk, Anna. *Legal Report on Confiscation of Russian State Assets for The Reconstruction of Ukraine*. Kyiv: KSE Institute, 2024. https://www.kse.ua/wp-content/uploads/2024/02/CBR-Assets-Legal-Report_February-2024.pdf

von Essen, Hugo. «Joint military exercises signal deepening Russia-China strategic alignment.» *MERICS,* May 7, 2025. https://merics.org/en/comment/joint-military-exercises-signal-deepening-russia-china-strategic-alignmen

Watling, Jack. *Emergent approaches to combined arms manoeuvre in Ukraine*. London: Royal United Services Institute (RUSI), 2025. https://www.rusi.org/explore-our-research/publications/insights-papers/emergent-approaches-combined-arms-manoeuvre-ukraine

Watling, Jack and Nick Reynolds. *Tactical developments in the third year of the Russo-Ukrainian War*. London: RUSI, 2025. https://static.rusi.org/tactical-developments-third-year-russo-ukrainian-war-february-2205.pdf

Webster, Joseph. «Trade data reveal the inner workings of Russia and China's defense industrial cooperation.» *Atlantic Council*, December 18, 2024. https://www.atlanticcouncil.org/blogs/new-atlanticist/trade-data-reveal-the-inner-workings-of-russia-and-chinas-defense-industrial-cooperation/

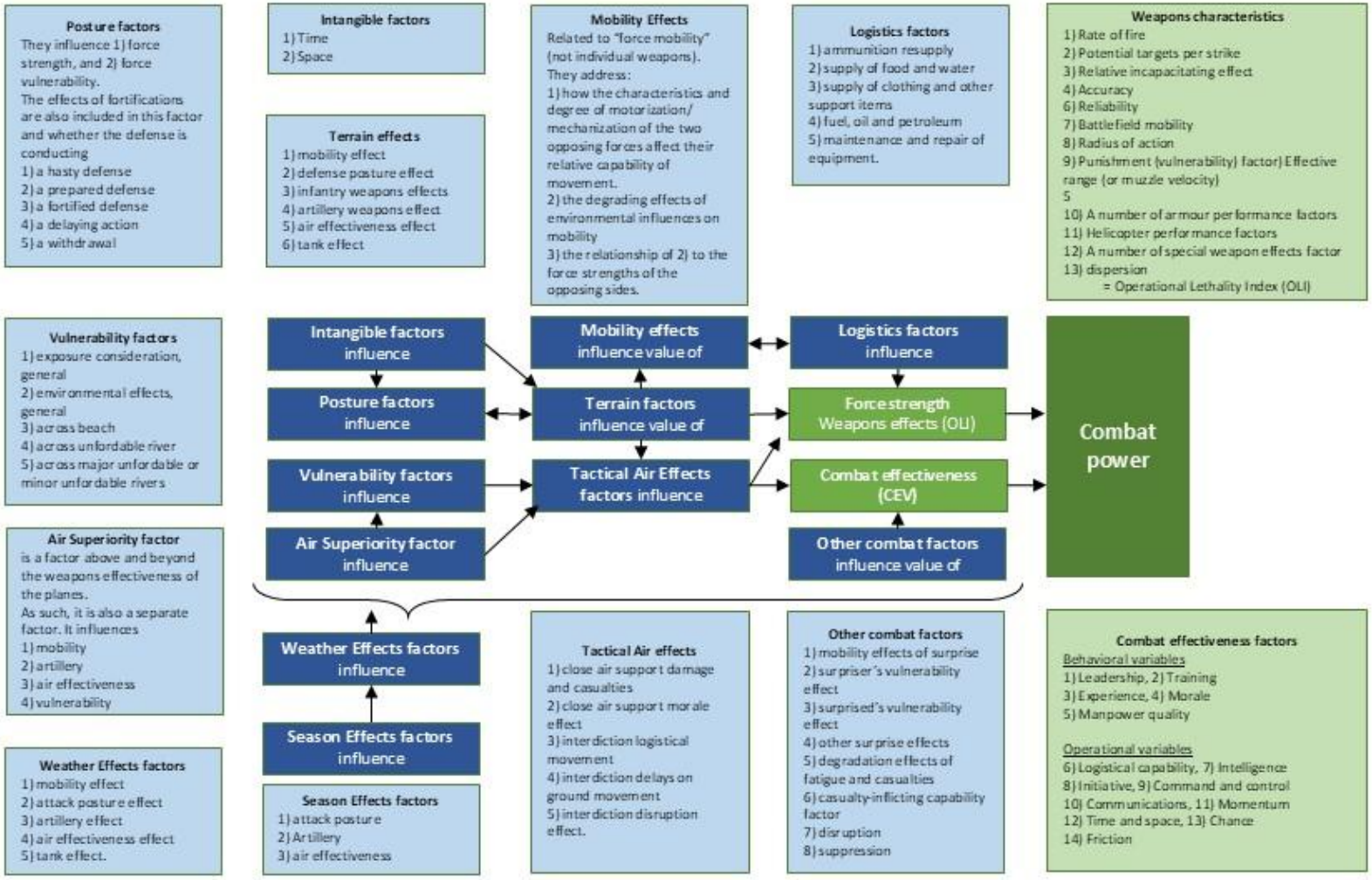
Wilkins, Joseph. «Russia is becoming increasingly dependent on Chinese banks as its yuan borrowings more than quadruple.» *Business Insider*, September 4, 2023. https://markets.businessinsider.com/news/currencies/dedollarization-chinese-bank-lending-to-russia-more-than-quadruples-2023-9

World Government Bonds. "Russia Government Bonds – Yields Curve." Retrieved October 2025. https://www.worldgovernmentbonds.com/country/russia/

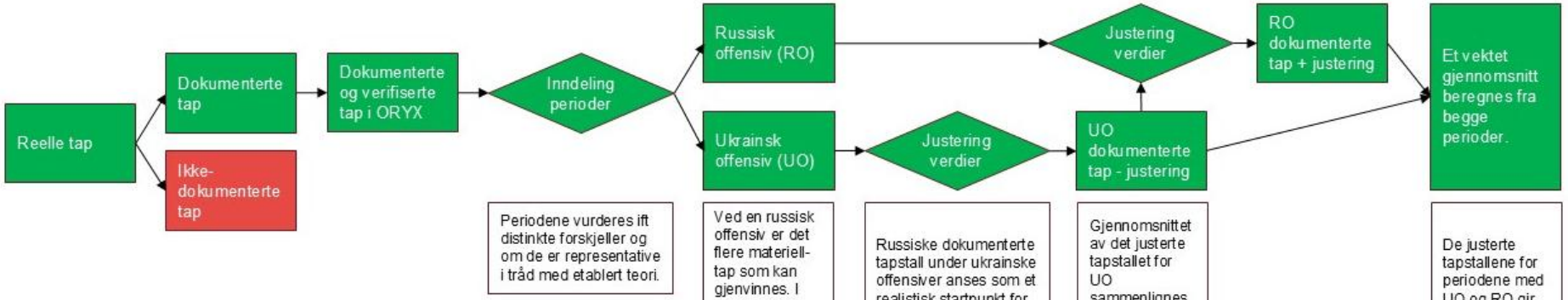
York, Chris. «As Russian Tank Losses in Ukraine Pass 9,000, Here's What You Need to Know.» *The Kyiv Independent*, July 1, 2024. https://kyivindependent.com/as-russian-tank-losses-in-ukraine-continue-to-mount-heres-what-you-need-to-know/

Zur.lt, «20 years of the CAP: Agricultural progress is significant, but it is necessary to strengthen the sector's resilience,» *Zur.lt*, 15 January 2025, https://www.zur.lt/20-years-of-the-cap-agricultural-progress-is-significant-but-it-is-necessary-to-strengthen-the-sectors-resilience/

Appendix A – Extended model for calculating combat power



Appendix B – Method for calculating average loss of Russian materiel



Antakelser og fakta som forutsetninger i analysen

1. Materiell som er verifisert i ORYX' database er stillbilder og videoer som er posisjonsbestemt og sjekket mot duplikater (fakta). Det er mest stillbilder fra bakkenivå (antakelse basert på et mindre utvalg/stikkprøver).
2. Materiell som blir dokumentert ødelagt, eller tapt, blir primært dokumentert av en motstander. En stridende part ønsker ikke å dokumentere sine egne tap av hensyn til hemmelighold, ettersom dette kan brukes av fiendens propaganda og etterretning (fakta).
3. Stillbilder som er tatt fra bakkenivå er tatt etter kampene har passert, eller i det minste stilnet såpass mye at fotografen kan ta bildet uten betydelig personlig risiko (deduksjon).
4. Av 2. og 3. følger at det hovedsakelig er en angriper som har presset en forsvarer ut av et område angriperen senere har kontroll i, som har fotografert ødelagt og forlatt materiell fra bakkeplan (deduksjon).
5. Av 2. og 3. følger også at det er langt færre stillbilder av materiell tilhørende en angriper, ettersom det er angriperen som har kontroll i området hans eget ødelagte materiell står igjen i (deduksjon).
6. Av 5. følger at dersom man skal estimere tapene til en part, bør man ta utgangspunkt i en periode denne parten hovedsakelig har vært på defensiven, og evt. korrigere for kjente forhold for å finne representative størrelser for tapene (deduksjon).
7. For å vurdere pålitelighet og relevansen til de verifiserte tapstallene registrert i ORYX' database kan man benytte estimater på personelltap til å estimere forventede materielltap basert på etablert teori (teori/fakta).
8. Ettersom vi systematisk utelater ikke-dokumenterte tap fra grunnlaget, tilsier dette at et videre nøkternt estimat av tapstall mer sannsynlig ligger noe lavt, enn noe høyt (deduksjon).

De justerte materiell-tapstallene for den første perioden med UO sammenlignes med estimerte forventede materielltap basert på etablert teori. Testen ga mindre avvik, som indikerer at det er en sammenheng mellom teori og den valgte metoden over, hvilket igjen styrker vår hypotese om at den valgte metoden er gyldig. En annen indikasjon på at metoden er gyldig er at tapstallene på russisk materiell fra den ukrainske generalstaben er 8% høyere enn oppjusterte totale tap (inkl reparerbare) iht denne metoden. Dette er iht forventning.

Etablert teori basert på studier av empiriske data

(*Attrition* – T. Dupuy (1995))

1. Materielltap er en funksjon av personelltap. Pr. % av personelltap tapes 6% av strv.
2. Av tapte stridsvogner kan 50% berges og repareres for en angriper og 30% berges og repareres for en forsvarer. En angriper som klarer å tvinge forsvareren bakover vil kontrollere slagfeltet etter striden og kan berge materiell etter striden har passert og uten påvirkning av forsvareren. Forsvareren må berge materiell under striden og kan følgelig ikke berge like mye av sitt tapte/skadede materiell.

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