

ARMS TRADE IN THE AGE OF TURBULENCE: THE CRISIS IN UKRAINE, WESTERN SANCTIONS, AND THE RUSSIAN DEFENSE INDUSTRY



Arms exports are an important component of foreign trade and foreign policy aspirations of every country aiming to strengthen its role in the global arena. It is no coincidence that against the backdrop of the ongoing Ukrainian crisis, the EU, the United States, and Ukraine itself have sought to put pressure on Russia by restricting their arms trade with it. How will these restrictions affect Russian arms exports and imports, and the country's defense industry? Will Russia manage to reorient its defense industry towards the Asian markets? And will the defense industry be able to keep the Russian armed forces supplied with all the required weaponry, including the state-of-the-art high-tech systems?

Security Index presents an in-depth analysis of these issues, which was conducted in the format of an expert roundtable. The discussion benefited from participation of leading experts in the field: Evgeny Buzhinsky, Senior Vice President at PIR Center and Deputy Director General for foreign markets at the JSC Vega Radio Engineering Corporation; Natalia Kalinina, Chief Researcher at the Institute of World Economy and International Relations of the Russian Academy of Sciences (IMEMO RAN) and member of the PIR Center Executive Board; Vadim Kozyulin, senior researcher at PIR Center; and Dmitry Litovkin, political commentator for the Vzglyad business daily.



R O U N D T A B L E

THE RUSSIAN AND UKRAINIAN DEFENSE INDUSTRIES: AT THE EPICENTER OF THE UKRAINIAN CRISIS

KALININA: The crisis in Ukraine and the suspension of trade between the Russian and Ukrainian defense industry companies will obviously have an impact not only on the Russian arms trade but on the Russian defense industry as a whole. Until recently, over 100 Ukrainian defense companies supplied at least 250 million dollars' worth of various parts and components to Russian defense contractors every year. Ukrainian suppliers also had a further 250 million dollars' worth of subcontracts under Russian defense procurement programs. Taken all together, Ukraine was selling about 500 million dollars' worth of defense products and services to Russia every year. These sales made up almost half of Ukraine's entire defense exports.

Some of the defense products and services supplied by Ukrainian contractors are crucially important to Russia, including:

- maintenance services for the RS-20 ICBM, provided by the Yuzhnoye (Pivdenne) Design Bureau;
- air-to-air missiles supplied by Artem;
- components for the Khризantema-S systems supplied by Fotopribor;
- computing stations for the S-300 SAM systems supplied by Lorta;

- helicopter engines supplied by Motor Sich; these engines are used in Russian helicopters destined for exports and supplied to Russia's own armed forces.

Before the Ukrainian crisis broke out, Russia and Ukraine were considering a joint venture to launch mass production of the An-124-100 Ruslan heavy transport aircraft. This would have been the largest bilateral cooperation program in the aerospace sector for the next 15–20 years. Russia and Ukraine were also working together on the development and testing of the An-70 medium transport aircraft. Ukraine supplied engines for the Yak-130 combat trainers and ship engines (including engines for frigates built under export contracts). The products and services supplied to Russia by the Ukrainian defense industry were not subject to quotas, licensing, or customs tariffs, and the number of individual items on the list of defense imports from Ukraine was approaching 10,000.

Experts reckon that the weapons systems that cannot be produced without continued cooperation with Ukraine and some other CIS states include the entire range of Sukhoi and MiG planes, as well as helicopters, diesel-electric submarines, various types of ships (corvettes, anti-submarine ships, and missile boats), the T-90A tank, the Smerch MLR system, the Iskander theater ballistic missile, various radars, SAM systems such as the Tor-M2, Buk-M2, and Triumfator, the Igla MANPAD system, the Tunguska gun-missile AA system, and others.

Reducing Russia's dependence on defense imports from Ukraine has lately become one of the most pressing national security concerns, with direct implications for the country's capability to defend itself. The government has announced a program of Ukrainian imports substitution to be completed over the next two or three years. These ambitious deadlines, however, appear overly optimistic, and a certain amount of disruption to Russian production of weapons and defense hardware for both domestic and foreign customers seems inevitable.

KOZYULIN: Clearly, the ban introduced by the Ukrainian government on exports of weapons and components to Russia is as painful as an amputation. But history holds numerous examples of a national defense industry starting to flourish precisely after the introduction of sanctions. There are even examples of arms embargos forcing countries to create a national defense industry from scratch.

Another important consideration is that the Ukrainian defense industry has an even greater interest in continued cooperation than the Russian industry. Defense exporters in Ukraine have numerous loopholes to circumvent the ban, including re-exports, setting up joint ventures in third countries, or simply ignoring the government's orders. Ukraine has always been and still remains a corrupt country, and money still opens all kinds of doors there.

LITOVKIN: Disruption of the arms trade with Ukraine will be a painful but not fatal blow for Russia. Ukraine was the sole supplier of many components imported by the Russian defense industry, including helicopter and ship engines, air-launched cruise missiles, and artillery fire control systems. Launching production of these components at Russian facilities will be costly and will take a long time. But the launch of new production facilities and the rollout of new technologies will be a major boost for Russian developers of weapons systems. In fact, these effects are already being observed in some areas.

BUZHINKSY: For Russia, the most important area of cooperation with the Ukrainian defense industry is the production of engines for aircraft (the Antonov transports), helicopters (TVZ-117 engines for the Mi-24 and Mi-8 helicopters), and ships (the M70 and M75 gas turbine engines for various classes of ships, especially Project 11356R frigates that are being built for the Black Sea Fleet). Other crucial imports include air-launched guided missiles, radars, and avionics.

The list of products imported from Ukraine by Russian defense companies includes more than 3,000 parts and components supplied by more than 160 Ukrainian companies. These imports are used in the production of more than 200 weapons systems and special hardware. Disruption of these supplies could have an adverse impact on the Russian defense procurement program, especially in such areas as aircraft and engines. It could also make it difficult for Rosoboronexport to fulfill several arms export contracts.

Nevertheless, there is no denying that in recent years Russia has been implementing a deliberate plan of Ukrainian defense imports substitution. Also very few, if any, Russian

defense programs that are crucial for national defense capability rely on Ukrainian components (Topol-M, Yars, the new railway-based missile complex, and the latest S-300 and S-400 SAM system modifications). Experts from the Defense Industry Commission believe that it will take Russia three or four years to launch production of the parts and components that were previously imported from Ukraine. Once that happens, Russia will have a complete in-house production cycle for almost every single type of weapons systems.

For Ukraine itself, meanwhile, the consequences of the disruption of the arms trade with Russia will be catastrophic. To illustrate, 70 percent of the components used in Ukrainian weapons systems are made by Russian companies. Russia was also the destination of more than 50 percent of Ukrainian arms exports.

THE IMPACT OF WESTERN SANCTIONS ON RUSSIAN ARMS TRADE

KALININA: On the whole, Western sanctions will not be able to disrupt Russia's arms trade with its key partners. They can, however, have an impact on Russia's ability to secure new weapons contracts because they will affect the decision-making process by the existing and potential buyers. The United States and the EU will undoubtedly put pressure on these countries (for example, Washington has already urged the agricultural producers who are not on Russia's own retaliatory sanctions list to desist from increasing their exports to Russia). But the arms contracts that have already been signed will continue to be fulfilled, so there will be no sharp fall in Russian defense exports over the next four or five years. The Russian portfolio of defense export contracts currently stands at almost 50 billion dollars. The figure was rising rapidly in recent years, but that growth will now slow down.

BUZHINKSY: As far as the disruption of the arms trade with the EU and the United States is concerned, the losses will not be large because that trade was fairly small to begin with. This is especially true since the contracts that have already been signed remain in force, with the exception of the Russian order for Mistral ships. (These contracts include maintenance of aircraft and other weaponry in Eastern European countries. The only known exception is the Russian contract with Germany's Rheinmetall for building and equipping a combat training center in Mulino; that contract was cancelled by the German government when its implementation was already at the final stages.)

The Western markets for complex, high-tech and the most expensive weaponry (aircraft, air defense systems, ships, and submarines) are cornered by suppliers from the United States and the leading EU countries. What is more, NATO maintains an unspoken ban on buying such weapons systems from non-NATO countries, especially Russia and China. The only exception to that rule was the Greek contract for the S-300 SAM systems that were originally destined for Cyprus, as well as small Greek contracts for Russian air defense systems and hovercraft. The only kind of weaponry Russia was formally allowed to export is armored vehicles and small arms, even though it is quite difficult for Russia to compete with Western suppliers in that segment of the Western defense markets.

Most of the Russian defense exports are in such product categories as aircraft, air defense systems, armor, ships and submarines, and some types of missile weaponry and ammunition. Very few imported components are used in the export-destined Russian systems in these categories. Besides, the EU, the United States, Canada, Japan, and Australia are not among Russia's traditional defense export markets. Western sanctions are therefore unlikely to have a significant impact on the Russian arms trade with foreign countries.

KOZYULIN: Clearly, the Western countries will now be more cautious about the arms trade with Russia. Nevertheless, there is still a chance that the Russian defense industry will be able to receive components and technologies from Western suppliers, provided that the conflict in Ukraine is quickly resolved. Such hopes are based on the position adopted by France, which is trying to keep the Mistral deal alive. After all, France has worked hard to enter the Russian defense market over the past 20 years, so it does not want to lose that market if it can be helped.



IMPACT OF THE UKRAINIAN CRISIS AND SANCTIONS ON THE RUSSIAN DEFENSE INDUSTRY

KALININA: Russia has long begun to import parts and components for domestically produced defense hardware because Russian defense technology is lagging behind, especially in microelectronics. Russian defense contractors have no other choice but to import some components, including microelectronics. According to the information at our disposal, imported components are being used in the production of all the main weapons categories, including airplanes and helicopters, naval weaponry, armor, and large-caliber artillery systems.

For example, various types of fighter jets, which account for over 50 percent of Russian defense exports in dollar terms, are equipped with imported (mainly Western) avionics. To illustrate:

- ❑ The Su-30 KI jets produced under a contract with India are equipped with components imported from France and Israel.
- ❑ The Su-30 KM jets supplied to Malaysia are equipped with components from France, South Africa, and India.
- ❑ The Su-30 KA jets supplied to Algeria are equipped with French components.
- ❑ The latest Su-35 jet, which Russia is only just beginning to market to foreign customers, was expected to contain French components.
- ❑ The MiG-29 fighters upgraded under a contract with Slovakia include imported components to ensure their full compatibility with the existing NATO navigation systems.
- ❑ The MiG-29Ks being upgraded under an Indian contract are fitted with components supplied by France's Thales.

In dollar terms, up to 50 percent of the components of the An-148 military transport aircraft are supplied by Ukraine. Uzbekistan supplies up to 40 percent of the components for the Il-76MD transport, and up to 35 percent for the Il-78 aerial refueling tanker. The United States supplies engines for the Il-103 combat trainer, which accounts for about 10 percent of the value of the contract. Ukraine supplies the engines for the Yak-130 combat trainer, which also accounts for about 10 percent of the contract's value.

The proportion of imported components is even greater in the Russian production of helicopters. All of the helicopters destined for exports and most of the aircraft built for domestic customers are equipped with Western engines. For example, the Ansat multirole helicopter is equipped with Canadian engines; the Ka-226 and Ka-226K with British and French engines; the Ka-28 anti-submarine search and attack helicopter uses Ukrainian engines. Engines made in Ukraine are also the sole option for the Ka-31 AWACS helicopter, the Ka-32 and Mi-17 multirole helicopters, the Mi-35 attack helicopter, and the Mi-26 heavy transport. Depending on the type of helicopter, the engine accounts for 7 to 20 percent of the finished product's value.

Several Russian armored vehicles produced under export contracts (BMP-3, T-80, and T-90) are equipped with thermal imagers made by France's Thales and targeting systems made by Peleng, a Belarusian company. The launchers of several SAM systems (including the 2S6, the Pantsir-S1, and the S-300PMU), as well as the launchers used in the 9K58 Smerch MLR system rely on chassis supplied by Belarus, Germany, and even India (where they are being made under Czech license).

It is also well known that the engines of many Russian corvettes and frigates made under domestic and export contracts are supplied by Ukraine. France's Sagem was involved in upgrading the Admiral Gorshkov aircraft carrier under an Indian contract; it supplied the initialization systems for the carrier itself and the MiG-29K carrier-based fighters.

Imported components are also used these days in weapons systems produced for Russia's own armed forces. The first precedent was the 2007 contract with Thales for 100 Catherine FC imagers that were installed on Russian armored vehicles. A second contract for another 130 imagers was signed in 2008. A joint French-Russian service and maintenance center for these imagers was set up at the Vologda Optics and Mechanics Plant.

Of course, there is a whole range of weapons systems (including those used in the Russian strategic nuclear forces and strategic defense forces) where imported components cannot be used as a matter of principle. The same applies to the Iskander theater ballistic missile system, high-precision weaponry (especially homing heads), and some other weapons systems.

Counting the cost of the requirements of "ideal" armed forces and the amount of resources that are needed to implement the State Armament Program, it becomes perfectly obvious that our country cannot afford such figures. What is more, the priority arms procurement list drawn up by the Defense Ministry two or three years ago (and consisting of about 200 advanced weapons systems) cannot be fulfilled without imported components. This means that it simply cannot be fulfilled within the originally scheduled time frame.

The crisis in Ukraine and the EU restrictions on defense exports to Russia will therefore be a painful blow for Russian weapons programs.

RUSSIA IN THE GLOBAL ARMS MARKET: STILL COASTING ON SOVIET-ERA TECHNOLOGY?

LITOVKIN: Russia can no longer rely on Soviet-era defense technology to maintain its positions in the global arms market. Its arms trade with India is a good illustration. This is exactly why we have set up joint ventures with the Indians to develop the fifth-generation fighter and the latest anti-ship cruise missile, BrahMos. That is why the Indians have leased our most advanced nuclear submarine, etc. Other customers are also raising their requirements. Iraq has placed orders for Mi-28N helicopters and Pantsir gun-missile AA systems. Vietnam has bought Su-30 K fighter jets, and Algeria T-90 tanks and Yak-130 combat trainers. Libya has shown interest in the Khризantema, our latest anti-tank system, etc. All of these weapons systems represent the latest technology. Importantly, Russian weapons are still cheaper than Western equivalents. Even more importantly, Russia never links arms contracts to political preconditions, and always fulfills its contractual obligations.

KALININA: For a long time Russia had the advantage in the global arms market in terms of value for money and speed of delivery. In some categories, Russian weapons systems were 30–40 percent cheaper than Western equivalents, but offered roughly similar performance. This attracted buyers who are not very wealthy or very demanding. Now, however, the Russian advantage in terms of value for money and speed of delivery is disappearing. The quality often leaves the buyers complaining; the prices keep rising all the time (not only because of expensive imported components but also due to growing domestic costs), and the speed of delivery has long ceased to be a major competitive advantage.

In the medium term these negative trends will become even more pronounced because there are no reasons to expect any technological breakthroughs in the Russian defense industry, given the general state of that industry and yet another crisis that has been triggered by the situation in Ukraine. In many weapons categories Russia no longer has world-class technologies; the few exceptions include some aerospace programs and long-range air defense systems. Neither is Russian industry investing enough in R&D in such crucial areas as UAVs, remote-controlled aerial vehicles, UAV-mounted anti-missile systems, etc.

Another area where very little, if anything, is being done at the moment is drawing up the criteria for assessing the national security risks of export contracts that include the transfer of dual-use technologies or the results of R&D projects to foreign countries. One example of the damage done to THR military-political interests of the Russian state is China's policy of copying Russian weapons technologies.

The problem of improving Russia's competitiveness in the global arms market cannot, however, be resolved in isolation from the general state of the Russian defense industry. To retain its current status as a leading arms exporter, Russia must take measures to modernize defense industry production facilities and press ahead with import substitution programs. Meanwhile, the Russian arms trade system is increasingly becoming commercially oriented. This raises the risks of corruption and criminalization in this area of state policy.

BUZHINSKY: I do not have a feeling that Russia is starting to lag seriously behind in crucial technology areas. In the traditional Russian weapons markets, which I have listed above,



Russian weapons systems still remain competitive and in high demand. Of course, we are in fact lagging behind in some individual areas, especially electronic components. In recent years, however, major efforts have been undertaken to close that gap.

UPS AND DOWNS OF RUSSIAN DEFENSE INDUSTRY REFORM

BUZHINKSY: The State Armament Program that covers the 2011–2020 period is worth 20.7 trillion rubles. That includes procurement by the MoD and other uniformed agencies. The federal program Defense Industry Development Through 2020 is worth about 3 trillion rubles. Both of these programs include spending on the retooling and modernization of the Russian defense industry. Judging from the situation at the Vega Radioelectronics Concern, where I serve as deputy director-general for foreign markets, this process is already making rapid progress. Reliable financing has been made available, and the concern's production facilities are being retooled in accordance with the approved plans. Furthermore, there is a new modern facility being built in Tomsk that will produce high-tech radio-electronic modules (the so-called 3D microchips). I therefore believe that the measures being taken are entirely adequate to the requirements of the Russian armed forces and the country's national defense requirements. The main problems facing these plans include a shortage of skilled designers and technicians. This is a consequence of the Russian defense industry's degradation in the 1990s and the utter collapse of the vocational training system.

KALININA: Military experts believe that Russia is lagging about 20 years behind the United States in terms of the latest technologies. Even the Russian fifth-generation fighter, which is still in development, is no longer at the cutting edge because the Americans developed their own fifth-generation fighter almost 20 years ago.

The languid progress being made by Russian defense industry reform makes any further increase in Russia's arms export capability unlikely. Even more importantly, the government will probably miss its target of bringing the proportion of modern weapons systems in service with the Russian armed forces to 70–80 percent of the fleet from the current 15–20 percent.

There are also grave doubts about another target in the new State Armament Program for 2011–2020: "to refresh 9–11 percent of the Russian weapons and military hardware fleet every year". Under that program, the Russian armed forces are to receive 1,500 new planes and helicopters, 200 air defense systems, and many other weapons systems. The previous three SAP programs were severely underfunded, and none of them had achieved its targets. If the same happens to the latest program, the relevance and value of the government's strategic plans on national security will become a moot point.

KOZYULIN: Western experts often voice concerns about Russia's rapidly growing defense spending. But let us recall that the Russian defense industry and the Russian armed forces were close to an utter collapse in the 1990s, and the situation remained very difficult for almost two decades. Current spending will merely restore the capability that was very nearly lost. The Russian defense industry has yet to close the huge technological gap that appeared during the long crisis.

THE PILLARS OF RUSSIAN DEFENSE EXPORTS

LITOVKIN: Russia's main defense customers are Latin American and Southeast Asian countries. It has been demonstrated time and again that national defense procurement programs are usually the last to be affected by austerity measures during economic crises. On top of that, Russia is now in a position to offer credit financing to its defense customers. Some of them, such as Iraq, are buying Russian weapons with American money allocated to support democracy in that country. Rosoboronexport has a 35 billion dollar portfolio of contracts. This demonstrates beyond any doubt that weapons are an essential commodity.

KOZYULIN: I expect that the next several years will be a good time for Russian arms exporters. Demand for inexpensive and user-friendly weapons always grows at times of instability and international tensions—and these are exactly the qualities Russian weapons systems are known for.

KALININA: Russia is now second only to the United States in terms of arms exports. It will remain the world's second-biggest arms exporter over the next five or six years despite the ongoing crisis. Incidentally, the United States ranks first not because it ships more weapons units than any other country, but because the weapons it sells command very high prices. In unit terms, Russia already is the world's largest exporter in many weapons categories, especially aircraft.


As far as the geography of Russia's arms exports is concerned, over the past eight years the largest destination was Asia Pacific, which accounted for 55–57 percent of the total exports figure. It is followed by the Middle East with 14.2 percent, North and Northeast Africa (12.7 percent), South America and Mexico, the post-Soviet states, Sub-Saharan Africa, Eastern Europe, Western Europe, North America, and Central America and the Caribbean.

Over the next several years, Russian arms exports will still be dominated by such categories as planes and helicopters, armor, naval weaponry, and air defense systems. In 2013 aircraft accounted for 38.3 percent of those exports, naval weaponry about 17 percent, ground weapons systems 14.2 percent, and air defense systems 26.2 percent.

Asia Pacific, the Middle East, and North Africa will remain the largest buyers of Russian weapons. India will remain the most important customer in Asia Pacific. Large contracts may also be signed with China, Vietnam, Indonesia, and Malaysia. Key buyers in other parts of the world include Venezuela and Algeria. The seven aforementioned countries accounted for over 75 percent of Russian arms exports in 2013; the list of Russian defense customers included 60 countries that year.

Russia currently offers a complete range of weapons systems, from small arms to air defense systems. It also has several promising new products, including Mi and Ka-series helicopters; SAM systems such as the S-400 Triumf, Antey-2500, Buk-M2E, and Tor-M2E; the Pantsir-S1 gun-missile AA system; and the Igla-S MANPAD system. New Russian naval systems offered to foreign customers include Project 11356 and Gepard-3.9 frigates, Project 636 and Amur-1650 submarines, and Svetlyak and Molniya patrol boats. In the ground weapons segment Russia offers the upgraded T-90S tank, the BMP-3 infantry fighting vehicle and other armor using the same chassis, and the Tigr light armored vehicle. The Su-30 and MiG-29 jets were in especially high demand in 2013; the Yak-130 combat trainers are also quite popular with foreign customers. The latest Russian Su-35 aircraft is expected to score large sales over the next several years.

These forecasts, however, may have to be significantly adjusted if the pressure of sanctions against Russia continues to increase.

BUZHINKSY: I believe that over the next few years, the range of key Russian arms exports (aircraft, air defense systems, ships and submarines, armor and artillery, missiles, and ammunition) will remain unchanged. In addition to our traditional Asian markets, Russia will probably try to win new defense customers in Central and South America, and re-discover the markets of Sub-Saharan Africa. Neither should it abandon our markets in the Middle East and North Africa, but extreme instability in the region will make it difficult to secure new contracts. 



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